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DOMINION MEDICAL MONTHLY

AND ONTARIO MEDICAL JOURNAL

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VOLUMES XXXII, XXXIII.

101736
13/5/10.

TORONTO:
GEORGE ELLIOTT, PUBLISHER
203 BEVERLEY STREET

1909

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Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXII.

TORONTO, JANUARY, 1909.

No. 1.

Original Digest.

REPORT OF TWO CASES OF FACIAL HEMIATROPHY.

— — —
By GRAHAM CHAMBERS, B.A., M.B., TORONTO.
Physician Toronto General Hospital.
— — —

CASE 1.—C. S., female, aged 14, consulted me in July of last year on account of a scar-like patch on the left side of her chin. Enquiry concerning family history elicited no fact indicating predisposition to any disease. The patient has had measles and whooping cough. Nine years ago she fell on a pair of scissors, cutting her forehead just above and to the inner side of the right eyebrow. Seven years since a white spot about a quarter of an inch in diameter appeared on the left side of the chin. It was somewhat firm to the touch, and slightly depressed below the level of the surrounding skin. She does not think that it was surrounded by a violet border. At times itching was present, and at other times there was a dull pain in the region of the diseased area. During the next four or five years there was a gradual extension of the patch; the surface became more depressed and the color a brownish hue.

At present the patch, situated on the left side of the chin, is circular in outline, and about an inch in diameter. The tint of the skin is brownish. The general appearance of the patch gives one the impression of atrophic changes, the surface being considerably depressed below the level of the surrounding skin. When the skin is pinched up, the fold is very thin, which character is no doubt due to atrophy of the true skin and subcutaneous tissue. Atrophy of bone cannot be made out. The sensations of pain and touch are apparently normal; those of heat and cold

slightly dulled. The subjective symptoms are the same as those mentioned above.

The general condition of the patient is good. Other than that referred to above, there is no sign of disease except possibly a vasomotor disturbance, particularly of the face. This consists of marked flushings from slight emotional disturbance.

CASE 2.—Miss B., aged 20, was seen by me in November, 1903. Five years before a white spot appeared on the lower eyelid of the right eye, and there had been a gradual extension until the date of examination. At that time there were atrophic patches on right side of upper lip, right cheek, and right lower eyelid. On the upper lip the patch had a punctate appearance. Examination of mouth revealed the presence of marked atrophy of the superior maxillary bone. The patient complained of dryness in the right side of the mouth. Pain and itching were absent. Sensory functions normal. Shortly after the patient developed pulmonary tuberculosis, and was sent to Gravenhurst Sanitarium for treatment. For a time she improved much in health, but subsequently the morbid condition in her lungs became worse, and eventually caused her death in the summer of 1905.

In both of these cases we have a progressive atrophy of the skin and subcutaneous tissue of the face. In the second case, in addition, there is atrophy of bone. These signs are, I think, sufficient for one to diagnosticate the conditions facial hemiatrophy.

Facial hemiatrophy is a somewhat rare disease, less than 150 cases having thus far been recorded. Very little is known of its pathogenesis. Clinical observations teach us that the atrophic changes usually begin before puberty; that in a few cases a direct heredity is traceable; that the disease is commoner in women than in men; and that in the earlier stages of the disease the lesion may have all the characters of circumscribed scleroderma, or morphea. Pathological investigations, particularly the report of Mendel on the necropsy of a case of old-standing facial hemiatrophy, have given us some data bearing on the causation of the disease. Mendel found an interstitial neuritis of the trigeminal nerve, atrophy of the ascending root or the trigeminal, and atrophy of the substantia ferruginea. He was of the opinion that facial hemiatrophy is the result of an interstitial neuritis of the trifacial. However, this view would have us believe that atrophic changes without sensory impairment, such as are present in the disease under consideration, could result from an inflammation of a nerve containing both sensory and trophic fibres.

It would appear more plausible, as Turner and others have suggested, to look upon the morbid changes in the skin, subcutaneous tissue, bone, etc., as well as that in the nerve, as secondary to some morbid condition in the central nervous system either of the nature of a degeneration or arrested development. In this connection it is well to remember that the disease-picture has only been observed as beginning in comparatively young persons, usually before puberty, and never after thirty years of age. Arrested development is, therefore, probably a more important factor in the causation of the manifestations of the malady than atrophy. In morphea in adults arrested development is not a factor in determining the character of the patch. This difference in conditions explains, at least partially, the variations of the characters of the lesion of facial hemiatrophy from those of morphea.

The disease-picture is, as a rule, easily recognized. Atrophic changes, commencing in a spot or occasionally multiple spots or small patches, progressive in character, affecting true skin, subcutaneous tissue and bone, and occurring in persons usually before puberty and always before 30, should always suggest facial hemiatrophy. The absence of marked perversion of sensation and of degenerative electrical changes in muscles is also of value in the differential diagnosis.

Selected Article.

PRESENT STATUS OF THE CALMETTE REACTION.

BY IRVING WILSON VOORHEES, M.D., NEW YORK.

It is now a little more than one year since Calmette, following up the work of Wolff-Eisner and Vallée, described before the French Academy of Sciences a new method of diagnosing tuberculosis by means of a 1 per cent. solution of tuberculin applied to the conjunctiva. French and German physicians have been quick in working up this matter clinically, and have published already a large number of articles dealing with its efficacy. The English and Americans, however, have been slow in taking hold, and it is only recently that their experiences have appeared in current medical literature.

In the *Journal of the American Medical Association* of June 13, 1908, Prof. Frederick Tile, of Chicago, gives his results from a series of one hundred and fifty-seven cases in which the ocular reaction was tested. Great care was taken that only the best tuberculin obtainable for the purpose was used, inasmuch as indifferent results have been reported by investigators who used old tuberculin containing glycerin and other substances which rendered the reaction of dubious value. Tablets containing 10 mg. of dry purified tuberculin were dissolved in 1 c.c. of physiologic salt solution to make a 1 per cent. suspension; and a fresh solution was made up for each treatment.

Barring out all cases of eye disease, such as conjunctival hyperemia and simple conjunctivitis, it was found that the reaction takes place in typhoid, cerebro-spinal meningitis, gonorrheal rheumatism, secondary syphilis, and even in the eyes of apparently normal healthy persons, while in those cases of a demonstrable lesion, such as tuberculosis of the hip, spine, knee, cervical glands, etc., no reaction whatever took place. It is noteworthy that many incipient cases also failed to react, and since early diagnosis of human tuberculosis appears to be almost the only positive hope of ultimate cure, this fact is especially to be deplored. Even when bacilli were present in the sputum, the conjunctiva was unaffected by the serum in twenty-one cases, while

in twenty-one others, strange to say, the reaction was uniformly positive. This makes the chances of usefulness so nearly even that one is inclined to condemn at once the entire procedure; but when we recall that a like experience was gleaned from our first efforts with diphtheria antitoxin, the outlook is not quite so dark. It was only after considerable investigation and trial that anything approaching a correct dosage was obtained, and likewise it may be that Calmette's reaction is still too crude and imperfect in detail to mean much to the clinician.

In all laboratory tests we should ever remember that the evidence is not final, but merely corroborative, whether it be positive or negative. For just as no experienced diagnostician would certify to the presence of initial regurgitation in every case of apical systolic murmur without other signs, so should the laboratory man guard against a too positive statement based merely on the evidence furnished by microscope and test tube.

Our forbears were in this respect much wiser than we, inasmuch as they were obliged to depend on ear, eye, and finger, rather than upon insensitive glass or unsympathetic steel when differentiating between similar conditions.

Although present indications seem to declare the inutility of the ocular reaction in tuberculosis, it is certainly all too soon to forsake it for some new and equally unknown fetic which might lead us even further into the marsh land than does this uncertain light which we are now watching so intently.—*New York State Journal of Medicine.*

Clinical Department.

Hairpin as a Nucleus of a Vesical Calculus in a Woman.

By GEORGE W. WARREN, M.D., New York City, in the *American Journal of Dermatology*.

The following case, as are all cases of foreign bodies forming the nucleus of a vesical calculus, is of especial interest, because the stone occurred in the bladder of a woman.

The patient, a housekeeper about 40 years of age, widow for thirteen years, visited the post-graduate clinic, complaining of a hairpin in the bladder. Her family history was of no interest. She had been a moderate drinker of beer and whiskey, and also habitually drank three or four cups of tea and one of coffee daily. During the past year she had lost twenty pounds in weight. For several years she had been in the habit of using a hairpin in washing and rubbing herself in the region of the urethra. She stated that about eight months ago, while performing this toilet, she was careless in manipulation, and lost the hairpin through the urethra into the bladder. A short time thereafter she began to have pain in the left side, which soon grew constant, and had no relation to ingestion of food or movements of the bowels. At times the pain radiated to the lower abdomen and epigastrium, and occasionally was so severe that she had to walk the floor. These attacks occurred during the day. There were sharp pains in the urethra during micturition, a constant desire to empty the bladder, and at times small amounts of blood were voided.

Upon examination the bladder was found to be so contracted that only two ounces of fluid could be injected. When the cystoscope was introduced into the bladder it grated against a hard, foreign body, which occupied so much of the cavity of the bladder that a good view could not be obtained. The picture was that of the surface of a mulberry stone, from the periphery of which the bowed end of a hairpin protruded. The urine obtained at the time was pale in color, alkaline in reaction, and deposited a sediment containing large numbers of pus cells and red blood corpuscles.

Operation.—After the bladder had been irrigated with a 1-3000 solution of silver nitrate, the patient was placed in an exaggerated lithotomy position. An incision, six inches in length,

was made through the skin in the median line, beginning at the symphysis pubis. The fibers of the pyramidalis and the bellies of the recti muscles were separated, the bladder brought into view and then distended with boric acid solution. The peritoneum was stripped back so as to expose the fundus, and two guide sutures were introduced. The bladder was now emptied and split between the guide sutures. The stone so filled the bladder cavity that it was necessary to split the viscus through its entire length in order to remove it. The wound in the bladder was closed by a double row of sutures—first a continuous row of chromic gut, including all the layers of the bladder; second a continuous silk suture of a modified Lambert type. No drain was introduced into the abdominal wound. The bladder was emptied every two hours by catheter and irrigated with boric acid solution, one ounce of the solution being used at a time. The urine was voided spontaneously after forty-eight hours, and quite clear of blood after the first twenty-four hours. *Post-Graduate.*

Herpes Zoster Frontalis Associated with Glaucoma. By A. A.

BRADBURN, F.R.C.S., Edin., in the *Lancet*.

The chief feature which is generally relied upon to distinguish glaucoma from iritis is the size of the pupil. A recently published work says: "In glaucoma there is increased tension. In iritis the tension is usually normal, but for those who cannot rely on their estimation of tension there are other valuable points on which to base the diagnosis . . . it is the pupil which will in most cases give us the necessary clue. In glaucoma the pupil is dilated—often pear-shaped. In iritis the pupil is contracted." Glaucoma can, however, be associated with a *contracted* pupil when the iris is fastened down to the lens capsule behind, thus shutting off the posterior from the anterior chamber of the eye. The recognition of such an atypical condition is easy if one be careful to note the plane of the iris, which will be either that of the underlying lens, to which it is completely attached, or else ballooned out (iris bombé) by pressure of the aqueous behind it, the edge of the pupil by its attachment to the lens giving the pupil a characteristically cupped appearance.

The interesting feature of this case is the fact that although there was undoubted increase of ocular pressure the pupil was *not dilated*. Such a combination of symptoms is quite compatible

with an iritis in which the plus tension is due to congestion and swelling of the iris and increased viscosity of the aqueous fluid. What made the case still simulate iritis was the marked swelling of the upper lid and the accompanying intense conjunctival injection; in fact, a superficial preliminary examination presented a typical picture of iritis, and had not the eye been most carefully scrutinized, the instillation of a mydriatic would have seemed urgently necessary. On account of the edema of the upper lid making recognition of increased intra-ocular tension difficult, this feature, contra-indicating the use of a pupil-dilating agent, could easily have been overlooked. Had, therefore, a mydriatic been instilled, as symptoms seemed to call for, a most unfortunate result would assuredly have followed. The cultivation of a faculty for observing minutiae of detail is the secret of making correct diagnosis in eye affections. Now, not only had Dr. Weldon C. Carter correctly estimated the presence of increased tension, but had further noted that there was an *absence of the rose-red ring of ciliary injection* around the corneo-scleral margin which is always present in inflammation of the iris and ciliary body. He had also noted that the cornea was clear and bright, and the iris markings were not obscured, and the pupil was fairly mobile. It was plainly evident, then, that a combination of signs was present which were contradictory in character, and for this reason desired my opinion to help solve the problem.

The patient was a single woman, aged 53 years, the subject of rheumatoid arthritis attacking mainly the ankle and shoulder-joints. Her skin was hot and dry, the tongue was furred, and the left side of the face and head was dusky-red and congested. For three days she had been suffering from a most intense pain, radiating from the left eye over the forehead, the left side of the nose, and face. As already stated, the upper lid was considerably swollen and in a condition of partial ptosis. The conjunctiva lining the eyelids was congested, and to a certain extent the ocular portion as well. Some thin transparent mucus was present, as well as profuse lachrymation, and the eye was very sensitive to light and even to the slightest touch. The pupil was four millimetres in diameter, not perfectly circular, and moved under light stimulus. The color and markings of the iris were unaltered, the cornea reflected brightly, and the media were perfectly clear. The anterior chamber was shallow, and gentle, careful palpation revealed increased tension. Some recession of the optic nerve head could be seen, but was not in the condition associated with the later stages of glaucoma. The temperature and pulse were

normal. There was another symptom which was out of all proportion to the objective signs, and this was the severity of the pain, its intensity being such as is usually associated with an *acute glaucoma*. The clearness of the cornea, the absence of dusky venous engorgement of the ocular conjunctiva, as well as the absence of extreme hardness of the eyeball negated a diagnosis of acute glaucoma. Against the case being iritis was the mobility of the pupil, the clearness of the texture of the iris, and the absence of ciliary injection. It was evident, then, that the increase of tension was only a secondary manifestation of a cause which had not so far revealed itself. When the patient first consulted Dr. Carter, complaining of the severe pain in and around the orbit, he considered the probability of herpes zoster, and kept this probability in view until the development of the eye affection led him to weigh the possibility that the cause might arise from the eye itself. Twenty-four hours after my seeing the patient a crop of vesicles developed on the forehead, which at once revealed the true nature of the affection.

During the course of the disease a change came over the condition of the eye, which entailed the necessity for a second consultation: This time the eye was found to be free from pain, photophobia, and sensitiveness to touch. The tension was subnormal, the anterior chamber deep, the pupil semi-dilated and immobile, and the texture of the iris was partially obscured. The explanation of these altered appearances was simple. There was evidently a thin viscid but transparent mucoid secretion present in the aqueous, which accounted for the loss of transparency of the media and obscured the texture of the iris. The minus tension could be attributed to the defective secretory function of the ciliary body, due to the paralysing effect of the affection on the long ciliary nerves. These symptoms indicated the urgent necessity of preventing adhesions forming between the iris and the lens capsule which the viscid mucus in the anterior chamber of the eye tended to produce. The use, therefore, of a mydriatic was obviously required now as much as it was contra-indicated in the early condition, and under this treatment the eye rapidly recovered.

The case is considered worthy of record if only on account of the manner in which it indicates the importance of observing the minutest details and correctly gauging their true indications, and how it is possible for the so-called classical symptoms at times to become absolutely misleading.

Therapeutics.

Treatment of Leg Ulcers.

I am not expecting to advance anything new or make any criticism of others' treatment of leg ulcers. It has been only during the past six years that I have given any attention to such work other than the usual or general lumpy treatment, such as water and soap, ointment or powders, with the common result of more failures than cures. I have tried many of the published prescriptions, followed closely all the advice, with indifferent success. I found, and find, that no one treatment will cure all, or even most, leg ulcers. For the past few years, having paid more attention to office work, there has, in consequence, fallen to my lot a good many of these cases, and I dread them less than formerly. Now when a case presents itself I take a full inventory of the individual—note his every condition (constitutional and local), his habits, environment, and everything, as it is materially essential to the guidance of the treatment. I examine him as to the heart, kidneys, liver, blood, intestinal tract, skin, varicose veins, alcoholism, how he eats, what he eats, and how, in every other way, the patient lives.

A too strong or irritating application, or even a poultice which has been applied to an eczema on the leg, will often be sufficient as the cause of an ulcer, but most often either scratching or striking the shin, or any other way of bruising, is the starting point.

It will not be necessary to allude to the vascular supply of the leg, or even attempt to reason out the why and wherefore of any systemic disorder complicating or hindering repair. Yet, at the time we give local treatment we must as surely correct any systemic regularities as far as possible. That being understood, the local care of the ulcer will only now engage our attention.

The term varicose ulcer, I have come to believe, is wrong. The varicose condition may complicate and hinder treatment some, but not in any way be a cause, as the treatment is only that which the particular character of the sore requires, plus perfect bandaging from base of toes to above all varicose veins.

We will allow the term ulcer of the leg to include any ulcer, from the simplest to the most aggravated, without including bone involvement.

By far the greatest number of cases are among those who are unable to absent themselves from their occupation and lie in bed, which, in most cases, is of first importance; hence, we must treat the most of them with perambulatory privileges. The patient may be one who stands at the bench, forge, counter, wash-tub, or walks in plowing, and so on. All of these sores, as a rule, are better in the morning and worse in the evening. Ulcers that heal under absolute rest in bed are much easier to return than when they heal under other conditions. Skin grafting under any other condition than perfect rest in bed is, with me, a failure.

Each ulcer has either local or constitutional conditions, one or both, that must determine the character of treatment, for what will be soothing to one may irritate another; and to carry out the method of treating these ulcers which I find yields me the best results, soap and water, peroxide of hydrogen, pure sweet oil, crude petroleum, echinacea, ichthyol, silver nitrate, calomel, creolin, and bichloride of mercury, together with adhesive and flannel bandage and stocking, constitute my armamentarium.

Some ulcers are so intensely sensitive that soap and water cannot be tolerated. I place on them four or five thicknesses of gauze, saturated with the crude petroleum, warm, which will in a day or two allay the sensitiveness. The indolent ulcer may require the use of, at first, silver nitrate solution strong enough to coagulate the albumin, and may have to be repeated several times, then followed with echinacea, one part of the tincture to three or four parts of water, for its stimulating and antiseptic properties, or possibly alternated with a 10 or 12 per cent. solution of ichthyol. Then there are the very large, foul, deep sores, which will require in some a strong bichloride solution or hydrogen peroxide to cleanse, and some will only be cleansed by several layers of gauze, wet with a one to fifty creolin solution, renewed every few hours till all bad odor ceases, when the dressings will be echinacea, calomel, or ichthyol, till a milder dressing shall be indicated. Some of these sores are attended with a more or less intense eczema for some distance around, and for which I find nothing to answer so well as the compound diachylon ointment. Severe inflammation is present in and around the sore in some, to which a 15 to 20 per cent. solution of echinacea should be applied on several layers of gauze, and the gauze kept moist.

In each and every case as soon as the irritability, sluggishness, and foul odor can be eradicated and a down-grade tendency arrested, then the mildest dressing possible should be chosen. Each and every ulcer of any character must be cleansed as thoroughly as

it is possible, as also the whole of the surface of foot and leg, to as high as the bandage should reach. Then, with the leg elevated and allowed to rest in that position for a few minutes, begin at the base of the toes, with the best adhesive bandage, two inches wide, and bandage up to within one inch of lower edge of sore, then one inch above upper edge of sore continue the bandage as high as there may be any varicose veins or support of leg be necessary; let each strip overlap a little, and do not put on too tight, but snug only. After the above bandage has been completed you will then make the dressing indicated, using five to six layers of gauze over the sore, and letting it extend at least an inch beyond the sore in all directions; then house in the space with adhesive strips, after the same manner as the other; or, if the space is not too wide, it may be covered with one or two wide strips of adhesive plaster.

The dressing must be made every day, and only that part of the adhesive bandage removed that covers the dressing. These strips can be used several times in many cases till they become soiled or the adhesive surface destroyed.

When the ulcer has healed the adhesive bandage should be replaced with either a flannel bandage or a correctly fitted stocking, and worn only during the hours when not in bed. I have tried the dry hot-air chamber, X-ray, and high-frequency currents on some stubborn cases, but, with now and then an exception, I have to depend on the above treatment, varied as each case indicates.—*W. H. Blythe, M.D., in the Medical Council.*

**The Treatment of
Pott's Disease of
the Lumbar
Vertebrae.**

If we realize that the position of a tuberculosis lesion of the spine is usually situated at the anterior part of the body of a vertebra adjacent to and perhaps including an intervertebral disc, we will agree that treatment should provide, amongst other things, in this, as in all

tuberculous lesions of the joints, rest by immobilization of the bones forming the joint.

Rest is best secured by the use of some form of plaster jacket, spica, or bed, or by a special or other brace. Some of these forms of support necessitate the recumbent position. All of them may be used with advantage in that position.

Our choice of which particular way or means should be adopted to secure the essential rest should, at present, be guided

by the condition of our patient, especially as to whether he suffers from or is threatened with abscess, or flexion of one or both thighs, due to psoas contraction.

The theories of the action of a plaster jacket as ordinarily applied for disease in the lumbar region are:

1. It is said by some to act from the pelvis as a brace which supports the weight of the trunk, head, and upper extremities.
2. It is said by the majority of surgeons to act as a splint.

Practically a jacket can hardly be expected to support the weight of the parts above the pelvis. It would have to fit too snugly to do so, and, in the majority of persons, the pelvis would give too insecure a foundation.

In the mid-regions of the spine, a jacket will act as a secure splint, but in the cervical and dorsal regions, its action, as an efficient splint, is open to question. This has been demonstrated practically, with the result that on this continent a spica is a common form of treatment of Pott's disease of the lumbar region in all stages of this affection, and in England a double Thomas hip splint is frequently used for the same conditions.

If the giving of rest is the fundamental principle of the mechanical treatment of Pott's disease, and we are convinced that the advantages of the application of a jacket as ordinarily used and even a spinal brace are open to question, perhaps it may be of benefit to consider the anatomical peculiarities of the lumbar spine, in order to ascertain how rest may be best secured in those patients where it is deemed inadvisable to insist upon recumbency, and also as an adjunct to treatment by recumbency. The normal position of the lumbar spine is one of lordosis.

The intervertebral discs between the lumbar vertebrae are larger than in any other region, thus the movement possible between the bony segments of the lumbar region is greater than in any other region, with perhaps the exception of the cervical region. The experiments of Lovett have demonstrated that hyper-extension limits rotation in the lumbar region and that rotation and lateralization go hand in hand.

With these anatomical facts before us, the position of hyper-extension seems to be worthy of our consideration as an attitude to be desired in the treatment of this affection, as in this position the anterior parts of the articular surfaces of the bodies of the vertebrae (the parts perhaps first affected with tuberculous disease) are widely separated, thus preventing attrition, and the body weight is forced on the lateral masses, and rotation and lateralization are restricted.

In children the hyper-extended position is easily attained and maintained by the application of a plaster jacket, applied in much the following way:

The patient, facing the back of a low chair, is instructed to firmly grasp it. A nurse then grasps the child's hands and secures them in this position. An attendant then raises the patient's feet from behind until the lower extremities assume a position almost at right angles to the trunk. In this position of hyper-extension of the lumbar spine, a plaster jacket is applied, into which are incorporated strips of iron to assure the retention of the position now secured.

This method of treatment is not advocated for all patients suffering from Potts' disease of the lumbar region. In some, because of psoas contraction, we may control the lower extremities by a splint or spica. I would, however, draw your attention to the fact that hyper-extension of the spine must naturally control spasm of these muscles, although in a different manner from that ordinarily recommended.

In closing, I may say that this attitude of hyper-extension may be attained in much the same way, although neither in such extreme nor so securely maintained, by the use of a flexed Bradford frame or a plaster-bed. It may be secured also, but in even a less marked manner, by the use of a double Thomas hip splint.

Where psoas contraction is marked, one of these methods may be used for early treatment.

Local treatment should, of course, be used conjointly with general measures, including fresh air and general rest.—*A. Mackenzie Forbes, in the Montreal Medical Journal.*

**Local Applications—
Their Use and
Abuse.**

So far as we have been able to determine, remedial agents have been used externally in the treatment of disease from time immemorial. Without going into ancient history respecting the earliest methods or agents employed, my object in bringing this, perhaps unimportant, theme before this body is to determine, if we can, why so many different substances have been used externally in the treatment of disease. Is their survival to the present day the result of study and practical observation, or are we still following in the footsteps of our forefathers of long, long ago, and practising empiricism? Are the alleged virtues of certain agents, externally applied, real or purely imaginary, and due to some superstitious suggestion?

There is no more striking example of profound ignorance in our profession than the constant use of some one of the innumerable agents recommended by the manufacturer, or advocated by some routinist. Our profession inherited the habit of local treatment of wounds and other lesions from our forefathers. That we have improved in some small degree is barely possible, by discarding some of the filthy poultices so long in vogue and substituting less objectionable applications, though doubtless of no more benefit.

The use of external agents in the treatment of wounds or diseased conditions has always been, and is to-day, a favorite method with those outside of the profession, and it is a fact that there are a great many medical men who depend upon their use and speak in the highest terms of their efficacy, never giving nature credit for the good results.

Should we not recognize at the beginning of the twentieth century that the natural trend is for the large majority of wounds and inflammations to heal and disappear by the unaided efforts of nature? What we should endeavor to do is to get away from irrational empiricism, and base our practice on experience, and then this will stand the test of comparison.

How many of us will decorate a swollen gland or an enlarged joint with some substance like iodine, that will change the color of the skin and send our patient away rejoicing, bedecked with his paint not unlike the warring Indian, and, while we wait or perhaps do some thinking, the patient improves, and we congratulate ourselves and him upon the cure, believing the application did the work, when in reality it was the unaided process of nature.

It is remarkable that local applications have been used so very, very long, and are still so very common to-day, and yet we have no certainty of their benefit in the cure of pathological lesions, and the proof is so near at hand, simply by treating a number of similar cases with our choice agents and others with no local application whatever, outside of dry dressings. When put to this test, nearly all local agents will be found valueless.

A few years ago—and still practised by a large number of surgeons—it was customary to dust every wound with some powder shaken out of a fancy receptacle not unlike a pepper box. I feel that we are nearly away from this unscientific practice, and that we are learning to let wounds alone, to keep our hands off, and let nature have a chance. We are quite sure that if we use any of these things we should be certain that they are harm-

less; but, even if this be so, why should we do useless things? Are we agreed that powders are detrimental when applied to a fresh wound, and are they of any benefit to granulating surfaces? Possibly we can employ them to advantage in some forms of skin disease, like intertrigo or excoriation of the baby's buttock from secretions.

The irritating solutions that have been so much used and the medicated gauze of Lister and his followers are gradually disappearing. Iodoform gauze is still used by some in packing or draining a septic wound, but it has been demonstrated beyond controversy that plain sterile gauze will do as well, if not better. The most brilliant results in surgery have been the rapid healing of wounds where plenty of plain, sterilized gauze was used to absorb what moisture was thrown out in nature's efforts, with plenty of clean dressing outside, to prevent contamination.

These results have been obtained even in wounds from burns. How many of you have seen a man come into your office with his hands and face burned—say, first and second degree—the result of a burst water-gauge or a similar cause? Your patient happens to be a man of nerve, and perhaps somewhat proud, and does not want his face bound up in swaddling dressings, so as to appear as little injured as possible when he meets his family or friends. The hands and arms are dressed according to one of the customary methods, perhaps some ointment or other greasy substance; some of us, no doubt, will apply picric acid solution, or some other staining agent. The patient returns every day for this dressing, and we charge him for it every day for a week or two, while the face without these dressings has all healed in three or four days, the result of nature's efforts and the open air, causing dryness of loosened skin, which acts as a protection to the tissue underneath.

Prof. James E. Moore, of Minnesota, says that "liniments and blisters are still very popular with veterinary surgeons," but they have fallen into disrepute with us. Liniments have their uses, but their curative effect has not been demonstrated. They often relieve pain, and when "well rubbed in" the massage does good, and the patient gets the benefit of suggestion. Their greatest advantage is, however, that they give the patient a feeling that something is being done for him, and keep him and his sympathizing friends busy, thus preventing them from doing something else which might interfere with the cure nature is bringing about. Rather a humiliating admission, when we recall the former popularity of liniments with the profession. It is rarely indeed that the one-time popular blister does more than add to the discomfort of the patient.

The use of heat and cold, either moist or dry, as a local application is often very much abused. We often find that one surgeon will advocate and apply a hot, moist dressing where another will use cold. Take a crushed hand, for instance; one man will apply moist heat, thereby encouraging the ravages of bacteria—the one thing to be feared most—while another will apply cold until what little vitality was left in the crushed part is destroyed and gangrene results. In such cases it is much better to cleanse the parts and apply sterile gauze and absorbent cotton for protection and comfort, and allow nature to choose her own temperature.

Dr. Moore, from whom I have quoted considerably, says: "Our only positive knowledge concerning local applications is that they often relieve pain; their curative value is very doubtful." Dr. John B. Murphy says: "We should leave fresh wounds alone; that is, if they are clean, let them remain so. The irritating solutions that have been used, the rubbing and scrubbing that are outrageously done are abuses that we should not countenance." The moment the soft parts are broken, nature sends her army of phagocytes to that part of the body to repel the invasion of outside bacteria, and we should assist her in closing the wound as quickly as possible. Too much scrubbing may permit bacteria to enter the blood current, when otherwise they would not. The exudate that is thrown off is nature's bulwark and immediate attempt at repair, and oftentimes she is hampered by someone meddling by brushing away her defence or destroying her forces by chemical agents.

From an experience of over twenty years that covers the average physician's life, I have about come to the conclusion that powders do no good in surgical dressings, and oftentimes harm by forming a crust, under which bacteria may possibly thrive, though they may possibly be of service in some forms of skin disease or the nursery; that ointment or other oily substance should not be used except in selected cases, as where a dressing might stick or where the hair has not been shaved off, and then they should be sterile; that liniments are good if well "rubbed in," because we have here massage and psychic effect; that blisters and other forms of counter-irritation are of doubtful value; that moist dressings should be seldom used, and then only in selected cases, such as a boil. Here, if the knife was refused, I would use a very hot carbolic dressing of a very weak solution, because it would give my patient great relief. I would employ a cold alcohol dressing in an acute cellulitis, because it would allay the pain by contracting the capillaries, and thus assist nature in relieving the inflamma-

tion, just as the hot, moist dressing on the boil will increase the phagocytes and bring about rapid resolution. Proper bandaging and splints assist in giving comfort in not a few cases.

I have not attempted to cover this entire field, but trust I have said enough to start an argument that may result in good for the railway surgeon.—*J. G. Kelly, M.D., in the International Journal of Surgery.*

In this inflammation the pathology described **Acute Bronchitis** for acute inflammation of mucous membranes (*The Journal*, Dec. 28, 1907, page 2163), is localized in the bronchial tubes. Besides slight fever, there is pain from congestion, somewhat disturbed breathing and a cough due to irritation. In the first stage this cough is caused by the distension of the mucous membrane tickling or irritating the nerves, and is at this time dry, causes pain, and not only is not productive of expectoration, but the very jarring irritates the inflamed tissues; hence this cough should be stopped. In the next stage, when mucous secretion begins and later, perhaps, purulent secretion occurs, the cough should be encouraged.

If this acute bronchitis is prolonged into a subacute stage, then stimulation should be given to aid the mucous membrane to become normal and cease its hypersecretion.

The indication for treatment are the same as for acute coryza:

1. Prophylaxis.
2. The abortive treatment.
3. The treatment of the acute stage.
4. The treatment of the second stage or subacute condition.

The prophylaxis and the abortive treatment of acute bronchitis are the same as that of acute inflammation of the upper air passages (*The Journal*, Dec. 28, 1907, page 2163).

Simple acute bronchitis not caused by the influenza bacillus is rarely attended with much fever except in young children and old adults. If deemed best, two or three small doses of one of the coal tar antipyretics and some cathartic may be administered.

Quinin should not be administered during the acute congestive stage, as there is quite likely to be some congestion of the throat at the same time, and for the same reasons as stated middle-ear inflammation might be encouraged.

In young children a simple diaphoretic may be administered, as:

R *Liquoris ammonii acetatis* fl̄jiv
Sig.: A teaspoonful, in water, every hour.

Sweet spirit of nitre may be given, but is not of as much value

as supposed. If it is administered for this purpose, a half-teaspoonful may be given every half-hour for several hours.

A sedative cough mixture should be given, as:

R Codeinæ sulphatis	gr. iii
Ammonii chloridi	ʒiiss
Syrupi ipecacuanhæ	flʒiiss
Syrupi acidi citrici.....	flʒi
Aquæ	ad flʒiv

M. et Sig.: A teaspoonful, in water, every two hours.

The codein stops the irritability of the nerves and prevents part of the coughing which, being non-productive, is useless and harmful. The ammonium chlorid in small doses tends to make the mucous membrane secrete, which will relieve the congestion. The ipecac in this small dose tends to make the mucous secretion thinner, and hence more easily expectorated. (And the ipecac must be in small doses else nausea will be caused and the medicine can not be taken, and the object will be defeated; in other words, this ipecac must be carefully measured and not *guessed* at by the druggist who puts up the prescription.) The syrup of citric acid makes the solution sour, which is pleasing to most patients. It is a sad mistake to give a bad-tasting drug like ammonium chlorid in a sickish, sweet mixture. Also, the nauseating so-called expectorant syrups should never be ordered, as they do more harm to the stomach than they can possibly ever do good to the bronchial mucous membrane. The following official syrups should never be administered: Syrupus picis liquidæ, syrupus scillæ, syrupus scillæ compositus (except as an emetic), and syrupus senegæ.

Instead of codein sulphate in the above prescription, 0.0015 of a gram of heroin (1-40 grain) at a dose may be used if preferred. Morphin is more likely to cause nausea as well as constipation, hence it is not so useful as either of the above alkaloids.

If the bronchitis continues into the second stage and the expectoration has become profuse and easier, the cough mixture should be given every three or four hours instead of every two hours. If there is but little more cough than is necessary for expectoration, another cough mixture should be written without the codein (or heroin) and the ammonium chlorid may be increased. Also, if deemed advisable, the ipecac may be left out. If, after a few days, the bronchial secretion is still profuse, it is well to substitute terpin hydrate for the disagreeable ammonium chlorid, and this is best administered in capsules or tablets, as:

R Terpini hydratis.....	ʒiiss
Fac capsulas 20.	

Sig.: A capsule, with water, every four hours.

Or :

R Heroine gr. ss
 Terpini hydratis gr. lxxv
 M. et fac capsulas 20.

Sig.: A capsule, with water, every four hours.

Both of the above prescriptions may be ordered as tablets if desired.

The National Formulary recommends three elixirs of terpin hydrate as follows:

R Elixir terpin hydratis (N. F.) fl̄ssvi
 Sig.: Two teaspoonfuls, in water, every three hours.

[Each teaspoonful of the above represents 0.065 of a gram (1 grain) of terpin hydrate.]

Except when terpin hydrate is administered to children, it is best to give it in tablet, powder or capsule, as the amount that can be dissolved in a teaspoonful of any liquid is too small for an ordinary dose. Unless it is given very frequently, terpin hydrate, to be of any value in bronchitis, must be given in at least 0.30 of a gram (5 grain) doses. On the other hand, it must be remembered when the elixir of terpin hydrate is administered to young children that it contains 40 per cent. of alcohol.

Or the following may be ordered:

R Elix. terp. hydratis cum codeina (N. F.) fl̄ssiv
 Sig.: A teaspoonful, in water, every three hours.

[Each teaspoonful represents 0.065 of a gram (1 grain) of terpin hydrate, and 0.008 of a gram (1/8 grain) of codein.]

Or :

R Elix. terp. hydratis cum heroína (N. F.) fl̄ssiv
 Sig.: A teaspoonful, in water, every four hours.

[Each teaspoonful represents 0.065 of a gram (1 grain) of terpin hydrate and 0.004 of a gram (1/45 grain) of heroin.]

During the first and second stages of bronchitis the bowels must be made to move daily with some laxative, if such is needed, as many of the above cough mixtures cause constipation, in addition to the constipation which occurs from the fever caused by the cold.

After the cough medicine has been stopped or ordered taken only very infrequently, a tonic should generally be administered, such as small doses of quinin combined with iron and strychnin if deemed best.

If the patient is asthmatic and wheezing rales occur in the chest, or if the bronchitis persists into a subacute state, unless the patient is anemic or debilitated, potassium or sodium iodide in small doses should be given, as:

R Sodii iodidi ʒiss
 Aquæ flʒiv
 M. et Sig.: A teaspoonful, in water, three times a day, after meals.

This iodide can also be administered in milk or in effervescing water, but it is a mistake to combine an iodide with a nasty, sweet syrup; even the old compound syrup of sarsaparilla should be omitted.

If the patient is anemic and debilitated, iron should be given, and perhaps cod-liver oil or an emulsion of it. A half-teaspoonful, at least, of the pure oil three times a day will generally be as well tolerated as an emulsion. Or one of the several following official emulsions may be ordered:

Emulsum olei morrhuae.

Emulsum olei morrhuae cum calcii lactophosphate (N.F.).

Emulsum olei morrhuae cum calcii phosphate (N.F.).

Emulsum olei morrhuae cum calcii et sodii phosphatibus (N.F.).

Emulsum olei morrhuae cum extracto mali (N.F.).

Emulsum olei morrhuae cum hypophosphitibus.

Emulsum olei morrhuae cum pruno virginiana (N.F.).

The dose of any of the above is about two teaspoonfuls three times a day.

Creosote is sometimes given for this persistent bronchitis, but, if ordered, should not be administered too long, as it tends, after the first increase of appetite, to interfere with digestion and to disturb the functional activity of the pancreas and liver. A week or two of small doses of creosote, however, can do no harm, and may do good, as:

R Creosoti m. xx
 Glycerini flʒi
 Spiritus frumenti ad flʒiv
 M. et Sig.: A teaspoonful, in water, three times a day, after meals.

Any bronchitis that becomes subacute and then does not stop after several weeks, should be treated as a beginning tuberculosis, and such patients should receive the fresh air and rest cure found so valuable in preventing that disease in its incipency. It is not even necessary to give tuberculin or to vaccinate with tuberculin (if this vaccination is found to be a success) to ascertain whether a tubercle is present somewhere or not, as whether or not

the patient has tubercles harbored somewhere, the continued bronchitis makes a most splendid opportunity for the ever present tubercle bacillus to begin its work. Hence, such patients are not safe from tuberculosis until the bronchitis is well.

Patients with acute bronchitis, at least in the climate of most parts of the United States, should remain in the house during the acute stage. Also, there seems to be no doubt that, like any other acute inflammation, it will get well faster when the patient remains at absolute rest in bed. However, in this inflammation that is generally so simple, as soon as the fever has subsided most patients must go about their work. Of course, old people, debilitated patients, and young children, can remain at rest in the house until practically well, but the majority of patients have their acute bronchitis attacks last longer than they otherwise would because they must attend to their work, whatever that may be.

However well patients with pneumonia may do in tents or on roof gardens, patients with acute bronchitis do not do well in the early stages under exposure, hence the acute bronchitis patient should not be subjected to the fresh-air treatment of tuberculosis, although, of course, the air in the rooms in which he is should be frequently changed. In other words, the hygiene should be good.
—J. A. M. A.

Proceedings of Societies.

CANADIAN MEDICAL ASSOCIATION MEETING AT WINNIPEG AUGUST 23, 24, 25, 1909.

Dr. Blanchard, president, has appointed the following committees: the first two names are the chairman and secretary respectively:

Committee on Transportation.—Dr. Blanchard, Dr. Vrooman, Dr. Charles Mackenzie, Dr. Moorhead, Dr. Rogers, Dr. Leney.

Ophthalmology and Otology.—Dr. Promse, Dr. Turnbull, Dr. Smith, Dr. Good, Dr. Raymond Brown, Dr. Williams.

Entertainment.—Dr. Rogers, Dr. Field, Dr. Devine, Dr. Milroy, Dr. Young, Dr. Fletcher.

Finance.—Dr. Patterson, Dr. Simpson, Dr. Pope, Dr. Brandon, Dr. Popham, Dr. Moody, Dr. Douglas.

Pathology.—Dr. Bell, Dr. Pierce, Dr. Vrooman, Dr. Webster, Dr. Leeming.

Credentials.—Dr. S. Campbell, Dr. Kenny, Dr. Mitchell.

Exhibit and Accommodation Committee.—Dr. Munroe, Dr. Coulter, Dr. Davidson, Dr. W. G. Campbell, Dr. A. M. Campbell, Dr. Hiebert, Dr. Dubuc, Dr. Burridge.

Medicine.—Dr. J. R. Jones, Dr. Hunter, Dr. MacDonnell, Dr. Rorke, Dr. Bjornson, Dr. E. W. Montgomery, Dr. Chestnut, Dr. McCalman.

Executive.—Dr. Chown, Dr. Smith, Dr. Blanchard, Dr. Milroy, Dr. Devine, Dr. McLean, Dr. J. R. Jones, Dr. Halpenny, Dr. Vincent, Dr. Hughes.

Surgery.—Dr. Nichols, Dr. MacLean, Dr. Blanchard, Dr. Todd, Dr. Lehmann, Dr. Galloway, Dr. D. S. Mackay, Dr. J. McKenty.

Advertising and Publication.—Dr. Hugh Mackay, Dr. Hughes, Dr. Stewart, Dr. D. Macdonald.

Physician's Library.

A catalogue of Lippincott Company's medical and surgical publications has been received. Any doctor wishing same may address the publishers for a copy.

Saunders' Books. This is the title of a handsomely got up and beautifully illustrated descriptive catalogue of the medical and surgical works put forth by the well-known and enterprising firm of W. B. Saunders Company, Philadelphia. Their Canadian agents are J. A. Carveth Company, Yonge Street, Toronto.

Scientific Laboratory Help in Diagnosis. The Abbott Alkaloidal Company, Chicago. This is a booklet of some good, practical value. It makes plain many points relative to the "report" laboratory findings and the actual conditions causing these findings. It is purposely made concise for the every-day needs of the working physician.

Canadian Almanac. We have been again favored with a copy of the Canadian Almanac, this time for 1909. This is the sixty-second series, and is a book of such general and complete information that scarcely any professional man can get along without it. Most of us have to refer to different works to get some sort

of information during the course of the year about matters referring to Canada. This is the volume to have ever ready at hand. Our only regret is that it does not include a complete and up-to-date directory of the medical profession in Canada. It has 496 pages; price, 50 cents. The Copp, Clark Company, Limited, Toronto.

International Clinics. Volume IV. Eighteenth Series, 1908. By leading members of the medical profession throughout the world. Edited by W. T. LONGCORE, M.D. Philadelphia, London, and Montreal: J. B. Lippincott Company.

As the publishers announce, subjects that cannot be found in text-books or monographs are generally fully covered in the *International Clinics*, a quarterly, containing illustrated clinical lectures, and especially prepared, original articles, practically giving bedside instruction, by the leading medical men of the world. Every three months the doctor can have, for the small sum of \$2, a volume containing twenty-five articles of the utmost value, thus keeping him right abreast of the times in every department of medicine and surgery. Each volume is aptly and thoroughly illustrated, with a complete index. Volume IV., eighteenth series, 1908, contains four articles on treatment, four in medicine, five in surgery, three in gynecology and obstetrics, one in hygiene, two in neurology, one in laryngology, two in pediatrics, and two in pathology. The two articles by Canadians in this volume are by Dr. Lapthorn Smith and A. G. Nicholls, Montreal, both being exhaustive and of great value. Dr. Nicholls' article deals with acute dilatation of the stomach, Dr. Smith's with clinical report of the work of the gynecological ward of the Western General Hospital, Montreal. There are several plates and figures to illustrate the various articles. In this is contained also the general index to the eighteenth series.

Radiotherapy in Skin Disease. By Dr. J. BELOT, with a preface by Dr. L. Brocq, physician to the Broca Hospital, Paris. Translated by W. Deane Butcher, M.R.C.S., surgeon to the London Skin Hospital. Only illustrated translation from the second French edition. With thirteen plates and twenty-eight illustrations. London: Rebman, Limited, 129 Shaftesbury Avenue, W.C.; New York: Rebman Company, 1123 Broadway.

The position radiotherapy occupies to-day in scientific and practical medicine renders this work of especial interest and value to the radiotherapeutist. It opens with an historical review of the

discovery of the X-rays by Prof. Roentgen, of the University of Wurzburg, which will be found of exceeding interest to most medical men. An explanatory chapter follows on the production of the X-rays, which is complete, yet concise. The biological effects of the Roentgen rays are dealt with at considerable length, as well as the methods of application and indications for the employment of radiotherapy. Particularly valuable are the advice and suggestions as to choice of apparatus and installation, the writer giving his own personal experience in employment of the latter. Then follows in detail, in Part III., the diseases of the skin in which radiotherapy has been employed; and in this, as in all parts of the book, on almost every page there are set out evidences that an extensive examination of the literature on the subject must have been made, involving great labor, ere the necessary material was gathered to present this book in its entirety. In almost all diseases of the skin has radiotherapy been applied, in many instances with marked success. There is a short chapter on various diseases and a complete and extensive bibliography. It is a book of 463 pages; its value, \$4.50.

Principles and Practice of Physical Diagnosis. By JONX C. DaCOSTA, JR., M.D., associate in clinical medicine, Jefferson Medical College, Philadelphia. Octavo of 548 pages, 212 illustrations. Philadelphia and London: W. B. Saunders Company, 1908. Agents for Canada: J. A. Carveth & Co., Toronto. Cloth, \$3.50 net.

To make an exact diagnosis is the essential thing in medicine. Satisfied upon that score, remedial measures soon suggest themselves. An examination of this book shows that it is undoubtedly one which will readily qualify the practitioner to apply his knowledge and the medical student to get his. It is a book of 548 pages, set forth in seven sections and an index. The titles of the sections are: Methods and Technic of Physical Examination; Examination of the Thorax; Examination of the Bronchopulmonary System; Diseases of the Bronchopulmonary System and Mediastinum; Examination of the Cardiovascular System; Diseases of the Cardiovascular System; Examination of the Abdomen and Abdominal Viscera. One can see from these titles how completely the field is covered. Particularly are the illustrations to be noticed, apt as they are and strikingly appropriate in every case. We are satisfied in saying that this book will be appreciated, as the text is complete, yet compact.

Surgery: Its Principles and Practice. In five volumes. By sixty-six eminent surgeons. Edited by W. W. KEEN, M.D., LL.D., Hon. F.R.C.S. (Eng. and Edin.), emeritus professor of the principles of surgery and of clinical surgery, Jefferson Medical College, Philadelphia. Volume IV. Octavo of 1,194 pages, with 562 text illustrations and 9 colored plates. Philadelphia and London: W. B. Saunders Company, 1908. Agents for Canada: J. A. Carveth & Co., Limited, Toronto. Per volume: Cloth, \$7 net; half morocco, \$8 net.

In a volume where hernia is written about by Coley, surgery of the prostate by Young, surgery of the appendix vermiformis by Murphy, surgery of the ear by Dench, and surgery of the serotum, testicle, spermatic cord, and seminal vesicles by Bevan—masters in their respective branches—one may expect to find a volume of the highest order of excellence. A goodly part of this volume is devoted to genito-urinary work. There is a chapter on examination of the urine in relation to surgical measures by Edsall; surgery of the kidney, the ureter, and the suprarenal gland by Rausokoff; surgery of the bladder by Bransford Lewis; stone in the bladder by A. T. Cabot; surgery of the prostate by Young; surgery of the penis and urethra by Horwitz, and that above noted by Bevan. There are excellent chapters on military, naval, and tropical surgery. That there has been exhaustive researches in the preparation of these articles is evidenced in the separate bibliographies after each article, showing that there has been a determined and conscientious endeavor to make the work complete, comprehensive, modern, and representative of the best work done in surgery right up to the present time.

Mind and Its Disorders. A Text-Book for Students and Practitioners. By W. H. B. STODDART, M.D., F.R.C.P., assistant physician to Bethlehem Royal Hospital. With illustrations. Price, 12s. 6d net. London: H. K. Lewis, 136 Gower Street, W.C.

As the study of psychiatry is taking on at the present time a position of prominence in Ontario and other parts of Canada, this will be a welcome volume to students and practitioners of medicine in this country. It presents a succinct account of the existing knowledge of mental diseases. The book is divided into three sections. The first deals with normal psychology; the second with the psychology of the insane, and in both the mental processes are correlated with the physical substrata in the nervous system. In the third the diseases are classified according to Kraepelin, although

in a few instances the author has thought it necessary to slightly change this nomenclature. The book has been kept abreast of the current literature on the subject.

Diseases of the Genito-Urinary Organs and the Kidney. By ROBERT H. GREENE, M.D., professor of genito-urinary surgery at the Fordham University, New York, and HARLOW BROOKS, M.D., assistant professor of clinical medicine, University and Bellevue Hospital Medical School. Octavo of 605 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Agents for Canada: J. A. Carveth & Co., Limited, Toronto. Cloth, \$5 net; half Morocco, \$6.50 net.

The first edition of this most excellent book appeared in the fall of 1907, and contained 520 pages of text. The second edition, which we are now called upon to notice in these pages, has 587 pages of text. This is owing to the introduction of several descriptions of new operative procedures and the correction and elaboration of other portions of the original text. We believe this work stands in a class by itself. It is the joint production of a physician and surgeon, and so differs from other works on genito-urinary surgery, in that the medical diseases of the kidney are introduced. The first edition contained 292 illustrations; the second, 323. The useful and practical character of this book has its stamp set on it from the very first chapter—General Examination of the Patient. Anatomy and physiology are wholly eliminated, and those purely sexual disorders have had their descriptions curtailed. As we have personally derived much benefit and knowledge from a perusal of the first edition, with the perfections and additions, this one will be most acceptable.

The Canadian Medical Protective Association

ORGANIZED AT WINNIPEG, 1901

Under the Auspices of the Canadian Medical Association

THE objects of this Association are to unite the profession of the Dominion for mutual help and protection against unjust, improper or harassing cases of malpractice brought against a member who is not guilty of wrong-doing, and who frequently suffers owing to want of assistance at the right time; and rather than submit to exposure in the courts, and thus gain unenviable notoriety, he is forced to endure black-mailing.

The Association affords a ready channel where even those who feel that they are perfectly safe (which no one is) can for a small fee enroll themselves and so assist a professional brother in distress.

Experience has abundantly shown how useful the Association has been since its organization.

The Association has not lost a single case that it has agreed to defend.

The annual fee is only \$3.00 at present, payable in January of each year.

The Association expects and hopes for the united support of the profession.

We have a bright and useful future if the profession will unite and join our ranks.

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Dominion Medical Monthly

And Ontario Medical Journal

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Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 203 Beverley St., Toronto, Canada

VOL. XXXII.

TORONTO, JANUARY, 1900.

No. 1.

COMMENT FROM MONTH TO MONTH.

Cancer Research in Great Britain has recently resulted in the production of the third scientific report of the investigations of the Imperial Cancer Research Fund, which was issued in the name of the superintendent of the work and director of the laboratory, Dr. Bashford. It is a volume of nearly 500 imperial quarto pages, profusely illustrated by drawings and tables, and made up largely of papers detailing the results of the physiological experiments conducted. The present volume is the outcome of three years' patient and persevering work, a work which, so far as the outside world is concerned, has been conducted almost in silence. There have from time to time been put forth many theories as regards the origin or cause of cancer, and each has found its advocates; but we remain to-day as much in the dark as to cause and treatment as of old. Any part of the body subjected to long-continued and constant irritation, it has long been known, is especially prone to be attacked by cancer. The nature of this connection between the irritation and the incidence of the disease has received particular attention by these researches during the past three years; and we are told by Dr. Bashford that it has been absolutely demonstrated that the idea of a congenital or embryonic origin is incorrect. The report tells us what, of course, was known before, that cancer of the skin of the

abdomen is practically unknown in Europe, but is extraordinarily frequent in Kashmir, which is put down to be due to the fact in the latter case of the wearing of a charcoal oven round the waist. In European women cancer of the floor of the mouth is rare, not uncommon in men; but in Ceylon and India generally the women suffer in a high degree from the disease in this situation. The Indian women chew betel nut, and sleep with the plug in the cheek, the seat of the irritation and the exact spot where the cancer first appears. There is, further, a form of cancer—melanotic sarcoma—which appears in the fingers of needle-women, which are often punctured by the needle. These occurrences, according to Dr. Bashford, antagonize the idea of the presence of "germs." The belief, therefore, that either infection or congenital germs is the cause, may be set aside, and the abandonment of that theory leads up to the consideration of the point as to what part hereditary predisposition plays in determining the frequency of the disease.

In 1906, out of a total of 141,241 deaths reported to the Registrar-General of Great Britain, in males above 35 years of age, 12,695 died of cancer; and out of a total of 140,607 in females, above the same age, 17,671 died of it. This goes to show that the chances of a man above the age of 35 of dying of cancer is about one in eleven; a woman, one in eight. Thus, taking one hundred families, half males and half females, above the age of 35, and no hereditary tendency being assumed, and each family of three males and three females, only fifty-one families could be expected to escape; in thirty-six families there would be one death; in eleven, two; in two, three or more. The report states that as yet no evidence has been obtained to show that cancer has been increased by inbreeding in animals, and that, therefore, special inherited liability appears to be very materially weakened. Nothing is said in the report as to treatment; so the surgeon's knife, pastes, and radiotherapy will continue to hold the boards probably for some time to come.

Fraternal Societies Fighting Tuberculosis was the substance of an article in these pages some months ago. They needed not organization to fight was the burden of the comment we made. They were already organized, and were meeting all over the country nearly every week-day night of the year. It is interesting now to note that one organization has already taken up this work. As in

Germany, the insurance societies have joined in the campaign and have found it profitable, from a financial standpoint, to join in combating this disease by erecting, establishing and maintaining sanatoria for their policy-holders, so in this land will the insurance corporations and fraternal societies find it a profitable and humanitarian project. The Modern Woodmen Society has decided to conduct a sanatorium at Rock Island, Illinois, for the treatment of its members afflicted with tuberculosis free of all charge to its members. Other societies will, no doubt, soon follow suit, and we will find these strong and influential organizations taking an active part in this campaign in the future. Connected with every lodge there is a doctor, or doctors, who could readily formulate rules, to educate their members. The other members could devise the ways and means of conducting restricted campaigns amongst their own immediate membership. Classes could be formed and a strong educational campaign carried on all over the land, which would be sure to result in undoubted benefit. Even if the societies in Canada could not go to the extent of establishing and maintaining sanatoria, they probably could endow cottages in connection with existing sanatoria, where their own members, or members of their families, when taken with the fell white plague, might be treated. If the Grand or Executive lodges could do something like this, and the subordinate lodges conduct something in the way of a "class," a great step in advance would be taken. Fraternal organizations are not founded alone on purely financial lines; they are admittedly humanitarian as well. Here is their opportunity.

Cremation in Canada seems to be growing, to judge from the operations of the Crematorium in Montreal. This is, as is well known, the only one operating in Canada. In that place the bodies of fifty persons were last year, up to December 1st, reduced to ashes: not the fine ashes one would imagine, but to small fragments of bone, for some pieces remain which enable one at times to distinguish cranial from other bones, and so forth. When this ancient yet modernized system was introduced into Canada in 1902, but three cremations took place in that year. During the time it has been in operation there have been, all told, one hundred and forty cremations, one hundred and twenty-eight of which have occurred since the Crematorium, Limited, took over this work from the Mount Royal Cemetery Company. In 1903 there were six; 1904, 16; 1905, 19; 1906, 19; 1907, 27; and this

past year, over fifty. Apparently prejudice to this mode of disposal of the dead seems therefore, to some extent, to be dying out; and as it is easy to carry out, inexpensive, cleanly and sanitary, it may in future years grow much in favor.

Radiotherapy finds its greatest field in diseases of the skin. It has been tried in pulmonary tuberculosis, and whilst temporary amelioration was obtained in some cases, owing to no positive results, it has fallen into disuse. In chronic ulcer many observers have recorded encouraging results, notably Gautier, Sjögren, Sederholm, Taylor, Colleville and Sequeria. Good results have also been recorded by Sokoloff, Bédère and Reboul in bacillary osteitis, arthritis and tubercular rheumatism. By Williams a case of exophthalmic goitre has been recorded greatly ameliorated. A case of hydatid cyst of the liver has been recorded cured by Diaz de la Quintana. Although it has been often asserted that syphilitic lesions were refractory to the X-rays, this idea may be exaggerated, as some recent observations would show. Attacks of epilepsy seem to have been diminished by their employment. Elephantiasis of the hand has been cured, and good results have been obtained in scrofuloderma.

Those Toronto Hospitals which will be awarded grants of \$50,000 each by the mandate of the people are to be congratulated. All doing exceptionally good work, and in some cases handicapped by lack of financial wherewithal, the citizens wish all these institutions to be helped along as much as possible. They care not so much who treats them, as the good hospital service available. A city of 350,000 people should have new, modern, up-to-date hospitals, and this vote of the people will give encouragement to the various managements. They know now that the people of Toronto will support all their hospitals.

Editorial Notes.

A DOCTOR'S SYMPHONY*

By GEORGE F. BUTLER, M.D.

With this new year resolve to live without anger, avarice, envy, and littleness. Resolve to be generous, liberal, and kind; to recognize the extreme value of health and human life, and to strive by every means to roll back the tide of disease and death; to give something to shape the million-handed labor to an end and outcome that will leave more sunshine and more flowers to human kind. Let your labor be so ordered that in future times the loved ones may dwell longer with those who love them; open your minds, exalt your souls, widen the sympathies of your hearts, face the things that are now as you will face the reality of death — fearless and alone. Remember that the battle of life cannot be fought by proxy; be your own helper.

Go thou alone—
 Let not thy courage fail,
 Nor weight of pain avail
 To stay thy onward feet,
 What e'er betide thee sink not,
 Even in thy anguish think not
 Under God's generous sun
 So much of sorrow lives save goodness to complete.

Go thou alone—
 Though friends and fortune pass
 Beyond thee, and alas!
 Love's visions fade away;
 Look to the stars and ponder
 How poor thou art, and wonder
 How the vast undertone
 Of thy creative thoughts could blossom in a day.

*Dedicated to the medical profession, and offered simultaneously to its press.

Go thou alone—
 The breathing atom in thee
 Shall one day rise divinely
 From this its cradled hour;
 Be wise and brave and loving,
 From lowliest essence moving,
 In circlelets one by one,
 Up to thy perfect shape, the highest earthly power.

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CANADA.

Only for a voyage o'er an uncharted sea,
 He weighed the anchor of his love for thee
 And thine, that he might blaze "Dernier Portage" trail
 With love for those to come, and henceforth sail
 O'er placid sea, wafted by wings of angel band,
 For, like "Les Voyageurs," he shall glide o'er your land
 And view the scenes from whence his inspiration came
 To read them, and rhyme of those who love his name.
 No manly attribute was ever known to pass him by,
 No truer Briton ever gazed on British sky.

JAMES LOWE PILING.

BROMLEYKITE.

To the readers of DOMINION MEDICAL MONTHLY, among whom there are many dear friends of our dear Dr. Drummond, who has crossed the "Dernier Portage," I send this eulogium. The author gives me authority to present it, although copyrighted.

JAMES S. SPRAGUE.

Public Health Notes.

The Regular Quarterly Meeting of the Ontario Board of Health was held in the Parliament Buildings, Toronto, during the week ending Dec. 19. The plans for the trunk sewer for the city of Toronto were approved. These plans provide for the emptying of partially-treated sewage in Lake Ontario in twenty-five feet of water at a distance of 1,500 feet from the shore. A deputation from St. Thomas was present regarding an up-to-date sewage disposal plant which it is proposed to construct there. An investigation was ordered into the complaint of Guelph Township, that the city of Guelph was polluting the Speed River by emptying its sewage into it. Deputations were also present from Pembroke, Barrie, and Weston. Dr. Charles A. Hodgetts, the chief medical health officer for the province, reported on the outbreaks of small-pox during the quarter. He stated that there had been forty-five cases in Ontario in October in ten municipalities, while he reported there had been 136 cases in twenty-three municipalities during November. With but few exceptions, those attacked with the disease had not been vaccinated during the past twenty years. If the municipal authorities, said Dr. Hodgetts, of this province desire to be rid of this disease, which has been smouldering in their midst for ten years, they must avail themselves of the only means to do so—vaccination and re-vaccination. Municipal councils had been uniformly indifferent to the question, and the act respecting vaccination is practically a dead letter. Drs. Sheard, Beeman, Hall, McCullough, and Hodgetts were present at the meeting.

Class Treatment of Tuberculosis has been started in Montreal under the charge of Dr. H. S. Harding, of that city. This class consists of seven persons afflicted with tuberculosis, is called the Alpha Class, and is the first of its kind to be started in Canada. The members of the class on joining it agree to follow strictly the directions of the medical man and nurse in charge. This system of class treatment of tuberculosis was inaugurated in Boston by Dr. Platt, who was present at the recent Tuberculosis Exhibition in Montreal, and gave a number of lectures there on the subject. In Boston the system has been carried on with great

success. It is said that a large percentage of those who enter classes recover, and are able to return to their regular avocations in their former good state of health.

Toronto Records 1,294 Cases of Diphtheria in 1908, as against 808 in 1907, an increase of 486. There were 1,118 cases of scarlet fever reported as well, as against 1,252 in 1907. The typhoid fever cases numbered 201, as against 186 in 1907.

Typhoid Fever is Raging in Montreal.—On the 31st of December every hospital was crowded to its limit with cases of the disease, while several have had to open new wings for the accommodation of the patients with the disease. It is estimated that there are over 200 cases in the hospitals, and that outside there are between 700 and 800 down with the disease. It broke out immediately after Christmas, and the rush for the hospitals began the day after. So far the origin of the epidemic has not been investigated, but there is a general call for an investigation on the part of the civic and provincial health officers.

Drink and Tobacco in Canada in 1907-1908 produced was to the extent of 6,849,763 proof gallons for the former and 32,088,000 pounds of tobacco, 200,133,000 cigars, and 385,000,000 cigarettes. The process of manufacturing the former consumed 7,679,000 pounds of malt, 72,997,000 pounds of Indian corn, 11,921,000 pounds of rye, 3,117,000 pounds of wheat, 395,000 pounds of oats and 17,212,000 pounds of molasses. In the matter of production Ontario is the great whiskey province. It has within its bounds seven of the twelve distilleries in Canada. The increased production of spirits is small compared with the growth in the output of beer. This has to be measured so far as the returns go, by the increase in the production of malt. In 1903-1904 the amount manufactured was 68,503,000 pounds; last year it was 99,577,000 pounds. Many regard this increase in the consumption of malt liquors as a temperance movement. From 1869 there has been a falling off from 1,124 gallons a head to 0,889 gallons in the consumption of spirits; while the quantity

of beer has risen from 2.290 gallons per head to 5.812 gallons per head of the population. The consumption of wines was less than a pint per head last year. The cigarette is apparently becoming the favorite form of using tobacco.

The Influence of Alcohol upon the Public Health, is the title of a paper in the December 26, 1908, edition of the *New York Medical Journal*, by Dr. Frederick Peterson, professor of psychiatry in the University of New York. Dr. Peterson summarizes what scientific investigators have determined to be the action of this drug: It is no longer considered to be a stimulant, but rather a depressant; it perverts digestion; it depresses and weakens the heart's action; it decreases the capacity to do muscular work; it diminishes the intellectual functions by dulling the creative faculty, impairing judgment, vitiating the correctness of perceptions, and by generating timidity; it brings about slow, far-reaching anatomical changes, such as fatty degeneration of the heart, kidney disease, diseases of the blood vessels, changes in the muscular tissues and in the cells and fibres of the nervous system. Its habitual use lessens the normal defences of the organism against infectious diseases, especially tuberculosis. Dr. Peterson says that our best method of eradicating the alcoholic evil is that of a campaign of education. The dangers of the misuse of alcohol Dr. Peterson has thus set forth on his prescription blanks: "Alcohol is a poison. It is claimed by some that alcohol is a food; if so, it is a poisoned food. The daily regular use of alcohol, even in moderation, often leads to chronic alcoholism. One is poisoned less rapidly by the use of beer than by drinking wines, gin, whiskey, and brandy. Alcohol is one of the most common causes of insanity, epilepsy, paralysis, diseases of the liver and stomach, dropsy, and tuberculosis. A father or mother who drinks poisons the children born to them, so that many die in infancy, while others grow up as idiots and epileptics."

The Provincial Board of Health of Manitoba recently adopted the following resolution: That the erection of numerous apartment and tenement houses in Winnipeg presents a danger of congestion in living space and of inadequate ventilation and light and other agencies detrimental to public health, and renders it

imperative, in the opinion of the board, that appropriate action be taken by the civic authorities to prevent or overcome the evil stated; also, that it is highly important and desirable that the Vital Statistics Act be amended by placing the administration thereof and the compilation of statistics under the board and requiring more frequent returns and a better classification of the causes of death in the province.

Deaths of Physicians in 1908.—During 1908 the deaths of 2,261 physicians in the United States and Canada were noted in the *Journal of the A.M.A.*, the equivalent of an annual death rate per thousand of 17.39, based on an estimate of 130,000 practitioners. This rate does not differ materially from those of the previous six years, which were, respectively: 1907, 16.1; 1906, 17.2; 1905, 16.36; 1904, 17.14; 1903, 13.73; and 1902, 14.74. The age at death varied from 21 to 102 years, the average being 59 years 6 months and 25 days. The number of years of practice of the decedents varied from the first year of practice to the seventy-sixth, the average being 30 years and 5 months. About 14 per cent. of those who died were members of the American Medical Association. Chief among the death causes were heart disease, violence, pneumonia, and cerebral hemorrhage, in the order noted.

Cause of Death.—During the past year 335 deaths were assigned to general diseases, 269 to diseases of the nervous system; 288 to diseases of the circulatory system, 201 to diseases of the respiratory system, 79 to diseases of the digestive system, 109 to diseases of the genito-urinary system, and 175 to violence. Among the chief assigned death causes were heart disease, 222; pneumonia, 172; cerebral hemorrhage, 171; accidents, 129; nephritis, 107; senile debility, 79; tuberculosis, 67; malignant disease, 51; typhoid fever, 37; suicide, 34; septicemia, 33; angina pectoris, 36; appendicitis, 25; diabetes, 23; influenza, 15; homicide, 12; gastritis, 11; tetanus, 4; and glanders, 1.

Of the 175 deaths from violence, 126 were due to accident, 34 to suicide, and 12 to homicide. Of the accidents, falls caused 22 deaths, poison 17, and gunshot wounds and railway accidents, each, 12; 10 were drowned, 9 died from burns, 8 from runaways, and 7 from automobile casualties. Of the 34 suicides, 20 were due to gunshot wounds, 6 to poison, 3 to cutting instruments, 2 to asphyxiation, and one each to drowning, fall, and strangulation.

All of the 12 homicides were due to gunshot wounds, and 4 of these occurred in duels or as the result of fends.

Ages.—Of the practitioners who died, 87 were between the ages of 21 and 30, 255 between 31 and 40, 310 between 41 and 50, 386 between 51 and 60, 450 between 61 and 70, 405 between 71 and 80, 175 between 81 and 90, 14 between 91 and 100, and 2 exceeded the century mark. The greatest number of deaths occurred at the age of 66, when 53 were reported, and 58 and 68, at each of which ages 50 deaths were reported.

Years of Practice.—During the first decade of practice, 259 died; during the second, 408; during the third, 467; during the fourth, 429; during the fifth, 345; during the sixth, 254; during the seventh, 54. Three practitioners exceeded 70 years of practice, one attaining 76 years.

Military Service.—During 1908 353 practitioners died who had seen service in the Civil War, 99 of whom had served in the army of the Confederate states; 15 died who had served in the Spanish-American War, 9 in foreign wars, and 3 in the Mexican War. There were 25 deaths of past or present members of the medical corps of the army, 43 of the medical department of the navy, 11 of the public health and marine hospital service, and 1 death in the newly established medical reserve corps. The deaths of 15 National Guard surgeons are reported, 5 of whom had attained the rank of surgeon-general.

Medical Positions.—During the year medical colleges lost 169 professors and instructors; hospitals, 250 members of staffs; counties and cities, 122 health officers; and boards of education and school boards, 71 members. There were 44 deaths of coroners, 81 of pension examiners, 93 of railway surgeons, and 26 of members of state boards of health or of medical examination. Of the physicians who died, 15 had served as state senators, 47 as members of the legislature, 24 as mayors, 10 as councilmen, 59 as justices of the peace or in civil offices, 29 as postmasters, and 37 as editors.

Among the more prominent dead of the year are:

Nicholas Senn, master surgeon, pathologist, and teacher.

Richard Douglas, Nashville, distinguished surgeon, gynecologist, and abdominal surgeon of the south.

Daniel Bennett St. John Roosa, New York City, ophthalmologist.

Thomas Edgar Schumpert, Shreveport, prominent surgeon of Louisiana.

James Coc Culbertson, Cincinnati, former editor of the *Journal of the A.M.A.*, and prominent in educational work.

Frank Hugh Montgomery, Chicago, specialist on diseases of the skin and venereal diseases.

George Michael Edebohl, New York City, gynecologist and abdominal surgeon.

Charles Harrington, Boston, orator in state medicine, sanitarian, hygienist, and administrator of the highest grade.

Frank Lemuel Adams, Oakland, Cal., formerly president of the state society.

Andrew J. McCosh, New York City, prominent general surgeon of the East. *Editorial, Journal of the A.M.A.*

The Measles Cannibal.—A few years ago, an epidemic of measles broke out among the Indian tribes living on Vancouver Island in British Columbia, not far from Fort Rupert, and the shamans or medicine men came to the conclusion that a cannibal sorcerer, whom they termed the *hamatsu* (measles cannibal), was slaying their children to eat them, and that he would continue to do so until he was killed.

As they could not slay a ghost in his own person, they arranged a ceremony in which one of their number posed as the cannibal, and was treated as they would have liked to treat the real foe. This fact of a substitute was, of course, not made public, only the medicine men knowing the truth of the matter.

Against a wall of rock was painted an imitation opening, in the centre of which the "cannibal" was fastened. At the proper time, after going through various incantations, a covering was jerked away, exposing the cannibal, apparently springing through the solid rock. He was promptly grasped by two of the priests, who dragged him out and rushed him through a fire which was burning in front of the place, and which was surrounded by all the members of the tribe, beating drums and singing at the top of their voices. By some jugglery, the cannibal was gotten rid of, and the people were told that he had flown away through the air and would not come back.

After this ceremony had been repeated several times to put an end to other epidemics, which were only too prevalent among the Indians, it grew into a sort of annual affair, managed by the members of a secret society whose members knew that the supposed *hamatsu* was only a man.—*Scientific American*.

News Items

Dr. R. G. BRETT is erecting a new hospital at Banff, Alta.

Dr. C. F. MOORE, Toronto, has returned from the Mayo clinic.

Dr. G. MACDONAGH, Toronto, has gone for a visit to Rio de Janeiro.

Dr. JOHN CAVEN, Toronto, is sailing from New York for Naples.

Dr. C. M. HINCKS, Toronto, '07, is practising on Avenue Road, Toronto.

Dr. W. H. EAGAR, Halifax, has sailed for England, where he will be married.

Dr. ROBT. W. FARLDS, late of the Erie County Hospital, is visiting in Toronto.

Dr. JOHNSTONE, of Millbank, Ont., is taking a trip through the western States and California.

Dr. J. R. DRYDEN, Guelph, Ont., died on the 2nd of December, 1908, aged fifty-three years.

Dr. D. M. FRASER, Stratford, Ont., died on the 8th of December, 1908, at the age of sixty-two years.

Dr. H. V. WURDMANN, editor and publisher of *Ophthalmology*, has moved from Milwaukee to Seattle.

Dr. J. N. E. BROWN, superintendent of the Toronto General Hospital, has returned from New York.

Dr. A. T. STEELE, Shelburne, Ont., died suddenly on the 25th December, at his father's home in Orangeville.

Dr. E. BLANCHARD is taking the practice of Dr. J. Archer Brown, Cannington, during the latter's absence abroad.

Dr. COCKBURN has returned to Surgeon Falls, after a three months' stay in New York.

Dr. J. LLOYD BURNS, of Toronto, has located in Woodbridge, Ont. Dr. Burns is a graduate of Toronto University.

Dr. D. GILLESPIE, Cammington, Ont., died suddenly of heart failure on the 22nd of December, 1908. He was seventy years of age.

Dr. A. J. FORD, who recently disposed of his practice in Thorndale, intends to resume practice in Vancouver, B.C., in the spring.

Dr. W. A. YORGE, managing editor of the Canadian Journal of Medicine and Surgery, is recuperating his health at Atlantic City.

Dr. J. A. GHEENT, of Seattle, Wash., has been elected a member of the Legislature for that state. He is a son of the late Dr. Ghent, of Priceville, Ont.

Dr. ALEX. STEPHEN, who died in Collingwood a few days ago, practised in that town since the year 1852. He and Dr. Pass, of Barrie, were the only doctors in Simcoe County in the early days.

Dr. A. R. DAFOE, who purchased the practice of Dr. Presault at Verner, has resold to Dr. Bedard, of North Bay. Dr. Bedard will continue to practise in North Bay and have an assistant in Verner.

Dr. C. C. CASSELMAN, one of the associate coroners for the District of Muskoka, has placed his resignation with the Ontario Government. It is understood that the chief reason for Dr. Casselman's retirement is that the duties connected with the office interfere largely with his medical practice.

Dr. WISHART, who has lately been appointed chief of the ear, nose, and throat department of the Toronto General Hospital, has, on that account, resigned his position as chief of that department in the Hospital for Sick Children, which has devolved upon his junior in the service, Dr. Geoffrey Boyd. Dr. Wishart has been elected a member of the Royal Society of Medicine, London.

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXII.

TORONTO, FEBRUARY, 1909.

No. 2.

Original Articles.

CALCULUS OF URETER REMOVED PER VAGINAM.*

BY WALTER McKEOWN, B.A., M.D., TORONTO.

Ureteral operations for calculus have up to the present been comparatively rare. It may be conditions necessitating such operations are more common than we suspect. Should further experience confirm this, an explanation may be afforded by means of radiography and ureteral catheterization, of a fair number of one-sided abdominal pains, the causation of which we have been unable to definitely fix.

Calculus when impacted in the ureter is commonly found in one of three positions: near the kidney, at the brim of the pelvis, or in the intra-vesical portion of the ureter. It is also found in women not infrequently at the point where the ureter enters the broad ligament. This was the position occupied by the calculus in the case I wish to report.

Looking over the literature bearing upon the operation of uretero-lithotomy, one is surprised at the small number of cases met with. It is difficult to believe, for instance, in these days of aggressive surgery that up to 1903 but six cases of stone, removed from the lower end of the male ureter, had been reported—three in Europe and three in America—and that Schenck, after an exhaustive and apparently thorough search, the results of which are set forth in the Johns Hopkins Medical Reports for the year 1902, had only been able to collect 101 cases of calculus from any part of the ureter.

The diagnosis between renal calculus and ureteral calculus may

*Reported at Canadian Medical Association, Ottawa, June, 1905.

be impossible. Frequently ureteral calculus has only been diagnosed after operations for supposed stone in the kidney: nothing having been found there, exploration of the ureter has disclosed the true condition. The diagnosis of ureteral calculus can only definitely be made by radiography, by feeling the stone in the ureter by an instrument passed into it from the bladder or, in the case of stones low down, by palpation through the rectum or vagina.

Schenck's Table, to which I have already referred, contains thirteen cases in which stone in the lower end of the female ureter has been removed through the vagina. This probably fairly well covers the existing reported cases, because Henry Morris, in the last edition of his work, only accounts for four cases of vaginal uretero-lithotomy, two of which were operated on by Israel.

Of the thirteen cases collected by Schenck, eight were diagnosed by vaginal palpation; two felt through the urethra; one seen through the cystoscope bulging into the bladder, and one recognized by catheterization of the ureter.

The thirteenth case, reported by Kelly, is of interest. The stone could not be felt through the vagina, but was recognized after abdominal section. He pushed it down, had it held in position by an assistant, and removed it through the bladder, the object of course being to avoid exposing the peritoneum to the danger of infection, the urine in these cases being practically never sterile.

My patient, a woman, was admitted to St. Michael's Hospital ten months ago. She complained of pain indefinite in its location, but on the left side of the abdomen, which had persisted with varying degrees of severity for sixteen years. Various conditions were held responsible for it by various physicians whom she had consulted, and it was finally agreed that she was neurotic. She suffered from menorrhagia and came under my care for curettement, hoping to secure some relief from the excessive loss of blood by this means. Under anesthesia I felt high up in the vagina, about an inch external to the cervix uteri, a hard mass, round and not much larger than a pea, which I immediately concluded could, from its extreme hardness, be nothing other than a stone, and from its location almost certainly in the ureter. As I had suspected nothing of this previously I felt it was better before attempting any operation to remove it that I should consult the patient.

Some weeks later she consented that an attempt should be made to remove it. I opened the vagina in front and to the left side of the cervix, much as one would do in commencing a vaginal hysterectomy. After burrowing outward in the broad ligament I was able to put the index finger of my left hand over the ureter and

bring it down with the contained stone into my wound. I then introduced, with considerable difficulty and after wide retraction of the vagina, the index finger of my right hand, so that I held the stone firmly between my two fingers, and made pressure upon it towards the lower wall of the ureter. As my both hands were thus engaged I asked my assistant to take the knife, to feel the stone with its tip and to carefully cut through upon it. After making a few light strokes the stone shot out through the opening, flying half way across the operating room. I introduced no stitches in either the uretral or vaginal wounds, and packed with gauze. A urinary fistula persisted for ten days. The patient went home in two weeks entirely free from her old pain, and has improved remarkably in health.

Freyer reports a case identical with mine in every particular, except that he attempted to fix the stone by means of a hook passed above it. Unfortunately the stone slipped away up the ureter, but was found in the dressings next day. The patient developed pelvic cellulitis, and made a very slow recovery. The operation through the vagina does not seem to have impressed him, as the next case of ureteral calculus upon which he operated was in a woman and low down, yet he made his incision in front along the ilium. Should such a case again present itself to me I would adopt the same method of operating. I feel that, aside from a possible ureteral fistula (and this may occur with any method of operating), it is practically without danger. By exerting pressure upon the stone a very small opening is necessary, the ureter stretching so as to permit its passage through an opening no larger than the diameter of the stone.

The calculus removed was quite round, the size, as before mentioned, of a large pea, and the surface polished. No examination was made to determine its character, the patient insisting upon its possession untouched, and she brought it away with her as a trophy.

VACCINATION.*

BY GEORGE ELLIOTT, M.D., TORONTO.

The Philadelphia County Medical Society held a symposium on Vaccination on the evening of November 25th, 1908, the contributions appearing in the *New York Medical Journal*, January 16th, 1909. Dr. Alexander C. Abbott, Chief of the Bureau of Health, Philadelphia, introduced the subject in a paper entitled, "The Role of the Bureau of Health in Public Vaccination." There are generally two weapons to employ in fighting smallpox appearing in any community, namely, hospitals for segregation of cases and vaccination. The latter is the most important, in getting smallpox out of a community and preventing its reappearance. The Philadelphia Bureau of Health pays particular attention to systematic vaccination, and as a routine matter of course. They are trying to revive the old custom of the obstetrician coming back after delivery and vaccinating the infant. A medical inspector in Philadelphia, when visiting a case of diphtheria or other contagious disease, carries a slip on which are these questions: Are there any persons unvaccinated? If so, how many? and what are their names? If any are found the bureau takes the matter up immediately with the family doctor; if he is uninterested the bureau performs the operation. In this the hospitals of Philadelphia to some extent co-operate, one hospital in particular sending daily to the Bureau of Health the names of all its unvaccinated visitors.

Whilst the State of Pennsylvania has declared itself in favor of vaccination, there is no law providing for compulsory vaccination, and the Bureau of Health insists that any hospital receiving State aid should see that all its inmates are vaccinated, in order to protect hospital patients from smallpox. In his official jurisdiction Dr. Abbott states he has only heard of one death from vaccination—the primary or secondary cause of death. He investigated the matter at once and found the child had had septic pneumonia when it died, and had a rhinitis when vaccinated. The physician who had issued the certificate had told Dr. Abbott he was not in favor of vaccination, but of variolation, which process he explained—and which also explains itself—"you put a drop of it on the tongue." The bulk of bad arms are in children whose wounds have been infected through dirt after the vaccination. As only six or seven such have come under his notice in 324,816 vaccinations since July

*Original Digest.

1st, 1903, performed by his medical inspectors, bad arms cannot be said to be plentiful in Philadelphia. Certificates of vaccination given at the time of the operation are worthless, in that no subsequent examinations are made, and very often the operation is not successful. Referring to the so-called "immunes" Dr. Abbott says one does not find many immunes if good virus is used. Care in the operation will minimize the bad results, and he thinks after-dressing is unnecessary if the child has clean underwear. The answer to the question: Does vaccination protect against smallpox?—is seen in the fact that smallpox is a medical curiosity in those countries where it is systematically practised.

Smallpox before and since the discovery of vaccination was dealt with by Dr. Jay Frank Schamberg. Smallpox began to appear in Europe about the fifteenth century, and the epidemics reached their maximum of frequency and extent in the eighteenth century. With a population of 530,000 in 1685, London had about 1,000 deaths a year from smallpox; and as about one in five died of the disease, there were annually in London 5,000 cases of smallpox. Prior to vaccination but a small percentage of people escaped its ravages. In 1802 it was proven that 45,000 persons died annually in the United Kingdom from the disease; while in Prussia 40,000 people succumbed annually; 150,000 in France. One year about that time it is said to have destroyed 2,000,000 lives in Russia. In Mexico it has been known to exterminate whole tribes of Indians, whilst Catlin states that of 12,000,000 American Indians 6,000,000 fell victims to smallpox.

Smallpox in former times was essentially a disease of children. In the days before vaccination the adult population represented mostly the survivors from smallpox, and it was estimated that only about five per cent. of persons were naturally insusceptible to the disease. Nowadays it is exceedingly rare for a successfully vaccinated child under five years of age to die of smallpox; and as was proven before the British Royal Commission on vaccination, it is even rare for one of ten years to die of the disease. Coincident with the diffusion of the practice of vaccination, there began about the dawn of the nineteenth century a pronounced decrease in the morbidity and mortality of smallpox. From the careful records which were kept, the decline in the death rate was simply marvelous within a short period after the introduction of vaccination. For twenty-eight years prior to vaccination there died each year in Sweden from smallpox 2,050 persons, in 1,000,000 of the population. In the forty years following its introduction the deaths annually averaged 158. During the seven years preceding vaccina-

tion, in Prague, the disease caused one-twelfth of the total number of deaths, and during the twenty years following it caused but one four hundred and fifty-seventh of the total number of deaths. The opponents of vaccination attribute the decline in smallpox since the introduction and general employment of vaccination to the improvement in sanitary conditions, but such conditions have exerted no similar influence over the mortality from measles, scarlet fever and whooping cough. Measles and smallpox are the most contagious of all diseases, but whilst during the same period in England smallpox mortality has declined seventy-two per cent., the mortality from measles has fallen only nine per cent. The death rate from whooping cough has declined but a little more than one per cent. The decrease in mortality from scarlet fever is evident only in recent years. In the general death rate of England there has only been noticed a decline of nine per cent, whilst the decline in the smallpox death rate has been limited to persons under fifteen years of age, above that age it has not decreased, because of the lack of revaccination in adults. How can this be explained on the grounds of improved sanitation? The history of the nineteenth century shows that smallpox increases with the neglect of vaccination; and in order to exterminate the pest there must be universal vaccination in infancy, and its logical complement in adult life, universal revaccination. Germany has taught the world how to utilize Jenner's discovery so as to exterminate smallpox.

At the St. Louis Exposition, four years ago, the German Government distributed broadcast a report on the subject. From 1893 to 1897 inclusive, there died from smallpox in Russia, including Asiatic Russia, 275,502 persons; in Spain, 23,000; in Hungary, over 12,000; in Austria and Italy, 11,000; in Germany, 287.

The "so-called" dangers of vaccination were taken up by Dr. William H. Welch. Deaths from time to time have resulted from vaccination. In England, from 1881 to 1889, there were 476 deaths certified to as being connected with vaccination. In the same time there were 6,739,902 primary vaccinations, an average death rate of one to 14,159 primary vaccinations. If vaccination was really accountable for these deaths, it is still far below that of chloroform as an anesthetic. In Germany the ratio is one death to 65,000 vaccinations, there having been recorded 35 deaths in 2,275,000 vaccinations. Voight in Germany himself has, in the last five years, vaccinated 100,000 people, with but one death. With a large experience in vaccination Dr. Welch has never seen a single death. He has investigated a number of newspaper reports and has almost always found them due to other causes.

Vaccination protects the individual from but one disease, and those diseases, asserted to be liable of introduction into the system of the person vaccinated: smallpox, scarlet fever, croup, typhoid fever, scrofula, consumption, syphilis, cancer, tuberculous formations, diphtheria and other affections will, as in any one not vaccinated, make their appearance as well in those who are recently vaccinated. This will happen now and again among the millions annually vaccinated. Eczema, lichen, erythema multiforme, impetigo, pemphigus, psoriasis, and a number of other skin affections may occur as a result of vaccination, but it is hardly possible, except in the case of impetigo contagiosa. Some disease to which the subject may be specially predisposed may be excited into action by the operation. But these skin affections are often seen independent of vaccination, and how seldom do they occur in the thousands of people vaccinated. That they do follow on the operation now and again is a mere coincidence. Erysipelas occurs as a result of secondary infection. It is not liable to occur where pure virus is used. Then the redness of the inflamed area must not be mistaken for erysipelas. Leprosy can now be positively eliminated from the list of dangers—the bovine is not subject to leprosy. Whilst it is possible to convey the infection of syphilis, it was an extremely rare occurrence in the days when humanized virus was used. Some cases have been reported from France and Italy. Many physicians in England, practising vaccination extensively for many years, have never seen it. The bovine is totally insusceptible to syphilis. This contention is no longer tenable. The danger from tuberculosis is not great, as all vaccine virus is taken from calves; and it is a well established fact that tuberculosis in calves is extremely rare. In 34,400 tested calves only one reacted. Then in most establishments autopsies of the calves are held before the virus is distributed. Tetanus, following vaccination, is unknown in France, Germany and other continental countries of Europe. A careful enquiry into a number of cases reported in America established the fact, that the tetanus poison was not introduced simultaneously with the vaccine virus, but subsequently. Roseneau states that tetanus organisms cannot grow or produce their toxine either in glycerinated virus or on dry points. Dr. Welch concludes: With the safeguards which at the present time surround the propagation of calf lymph, I feel perfectly sure in saying that if the individual is in a normal condition when vaccinated, if the vaccination is conducted with due regard to surgical cleanliness, and if the vesicle is properly guarded until the scab forms and falls off naturally, no dangerous consequences need be feared.

Clinical Department.

An Unusual Case of Thoracic Aneurysm. By W. BELCHER, M.R.C.S., L.R.C.P., in *Birmingham Medical Review*.

It is with some diffidence that I present these few notes relative to an unusual form of aneurysm, being doubtful whether they may prove of the same amount of interest to others as they were to myself, but still I thought I may be serving some good purpose by so doing. For while aneurysms are not at all uncommon, the unusual features evidenced in this particular case, at least in the earlier stages, prompted me to bring it to your notice, as it is with the earlier phases of the case I have chiefly to deal, and this again especially with respect to the referred pain or referred symptoms in connection therewith, for I consider (and I think later, from this case, you will agree with me) that even to the most experienced practitioner of medicine, or operative surgeon, referred symptoms are of paramount importance, certainly when dealing with the viscera of the abdomen or thorax, but to make the conditions more lucid I will give you a brief summary of the case as I saw it. I took two photographs of the tumor, which you can examine. Unfortunately the first was over-exposed, but the second one shows very well the malady in the later stages.

The patient, S. R., age 45, first consulted me some five years ago, 1903. At that time he complained of a severe pain in his left loin and belly, to the left and above the umbilicus, but the pain in the loin was the worst of the two, the pain at times shooting down his back and left leg. It had been present more or less for some weeks, and was as bad when lying down as up, being constant day and night, though rather worse at night. Local applications and rubbing gave him no relief.

His previous health, he stated, had always been very good. By trade he was a plumber, but in his earlier days he had been a bugler in the army; he had never had any serious illness, nor had he ever contracted any venereal disease (I was particular with regard to this). He was very honest in his statements and volunteered he would willingly have told me if such had been the case. He had been moderate with regard to his habits, drinking and smoking; was married, but no family.

The patient, when I first saw him, was a man of moderate build,

of fair but not good physique. My examination in the first instance was not as complete as I should have wished, as I was very busy at the time and gave him only very cursory attention. I came to the conclusion that he was suffering from lumbago, without, I must admit, a very laudable reason, as I am afraid this term, like influenza, is a very handy peg to hang one's diagnosis upon, when in doubt. Anyway, I treated him for such, with instructions to come again in a few days, which he did, with his condition apparently unchanged. Having had no relief from his symptoms, I examined him again, this time more carefully. His respiratory and circulatory functions were normal as far as I could ascertain, as also were those of digestion and elimination; nothing unusual was noticed in the urine. I did not detect anything abnormal in his chest. I saw him many times, and the treatment seemed of no avail. By this time (three months after) he complained of palpitation, and he had a curiously tender zone above and to the left side of the umbilicus, extending to the back, in fact, near about where he had at times some pain, the cause of which I could not make out; he remained under me some twelve months. At the suggestion of his employer I sent him to hospital. He was treated there as an out-patient for a few weeks. The pain by this time in his left loin was very real, and its peculiar transference by shooting to the umbilicus suggested renal colic, probably due to stone in the kidney or ureter, though the urine did not corroborate this. This view was evidently shared by the hospital surgeons, as the man was told to come into the hospital as an in-patient for operation. A lumbar incision (see photograph) was made, presumably with the view of ascertaining the condition of the kidney (1905), with negative results. He returned home. Later he became a patient, at his own initiative, at another hospital, and was ordered a poroplastic jacket, being told he had a weak spine caused by a growth on the spinal cord. Anyway, that was the statement he made to me afterwards. He then returned to me again. By this time there was very evident great spinal weakness, yet the reflexes of the lower limbs were normal, muscular power very fair, no wasting, other than would be expected from a patient confined as he had been for weeks in bed. He had no difficulty with defecation or micturition. But he could not walk far, and gradually got worse. He had to take to his bed and after a few weeks could not even sit up in bed with a bed rest. All this time the pain in the loin was excruciating, and the zone of skin already mentioned extending from the umbilicus to the back was exquisitely tender. I saw him periodically, and he gradually got weaker, and lay like a log upon his pallet.

In October, 1907, he called my attention to his back, saying he had a lump there, and upon examination I found a small pulsating expansile tumor, about the size, say, of a small tangerine orange, with a well marked systolic murmur, obviously an aneurysm. It was on a level with the spine of the sixth dorsal vertebra. This gradually increased in size in outward and downward direction. Though the pain in the loin was now less, the zone of hyperesthesia just below the ribs was of such a nature that the least touch with the finger or a piece of paper would cause the patient to cry out. The appearance of this tumor now, of course, revealed the true state of affairs and elucidated the former puzzling question as to the cause of the hyperesthesia; as this, I believe, is consistent with the physiological explanation that while anesthesia is produced on the opposite side of an unilateral lesion of the spinal cord, hyperesthesia is on the same side (thermal condition not inquired into). I asked Mr. Heaton to see him on the 21st December, 1907, with a view to seeing if anything could be done (as the tumor was still comparatively small) by way of giving him relief by operation. But he did not consider that any operative procedure would be possible in this particular case. He was given large doses of morphia, and at times took two to three grains per diem, to relieve the pain.

If I am not taking too much time, gentlemen, I should like, if I may be permitted, to make a few comments upon the special features of this case. Firstly, the great importance to be attached to referred pains or symptoms, and in this case associated with an alteration of sensation of the skin. Whilst we are all familiar with such, from a diagnostic point of view we cannot over-estimate its importance, for here we see an operation was performed upon an organ which was practically free from disease, yet all the symptoms pointed towards that particular organ being at fault. The question may be asked, Was there sufficient evidence for the operation? Whilst I cannot give a dogmatic opinion I should say "Yes," apart from the physical pain. Dr. Rose Bradford states that one of the symptoms here present, viz., zone of hyperesthesia, does occasionally accompany stone in the kidney. Failing this, it would have taken the skill of more than a modern Hippocrates to have written down the true pathological condition. When we come to review the case though, a small, slow-growing aneurysm in such a situation, pressing against the anterolateral column of the cord, will account for all the symptoms. Referring to Dr. Head's table, I find that at the level of the sixth, seventh and eighth dorsal vertebrae are situated tracts which influence sensation at a zone extending between the xiphoid cartilage and umbilicus, nearly horizontally backwards to spine; and the kid-

ney itself is connected with the tenth, eleventh and twelfth dorsal vertebrae, and we can readily understand that an enlarging aneurysm would later cause pressure effects upon these vertebrae, and so cause pain referred to the kidneys, and I should imagine this to be of very real importance to surgeons, as with such a delusive organ as the kidney, even with X-rays and other modern appliances, a positive diagnosis cannot always be made out with regard to stone, until it is actually seen by the naked eye. Nevertheless, whilst I consider in this particular case under discussion, had the principles as enunciated by the majority of surgeons been followed out, viz., apart from the symptoms of the patient, pain, etc., however severe it may be, evidence of stone should be corroborated by condition of the urine, and unless this contained some confirmatory deposit, blood, pus, etc., operation should be delayed, even of an exploratory nature, unless, possibly, the ureters having been separately examined by the cystoscope, no urine was secreted by the diseased kidney. The urine, when I examined it, afforded no evidence whatever of this nature.

As to the diagnosis of a growth upon the spinal cord, this was defensible and possible, as according to some authors the first symptoms are pains in the terminations of the intercostal nerves, but, again, this is one of the symptoms in aneurysm with backward pressure upon the spinal column. Beyond pain in the left leg there was no paraplegia, neither were the functions of micturition and defecation interfered with.

As to the true diagnosis of the disease, I think in the earlier stages it was impossible, certainly in text books there is no mention of such a possibility of the symptoms as occur here being connected with an aneurysm. And there were none of the cardinal symptoms present in the early stages at all, if we exclude referred pains and exacerbation of the pain at night time. And it is certainly remarkable that an aneurysm gradually increasing for at least three-and-a-half years, should not have exhibited symptoms referred to the thorax. Probably the character and the position would account for this. I take it it was of a sacculated variety (unfortunately the patient died whilst I was away on my holiday, as I intended making a *post mortem* examination), and at first the pressure effects were directed in a posterior direction against the bodies of the dorsal vertebrae, eroding these. The patient died in September of this year, from exhaustion and malnutrition, and as you will observe from photograph, the aneurysm perforated the ribs and became of an enormous size, six or eight inches across. Pressure symptoms upon the vital organs, lungs, etc., with edema, occurred in the later

stages. I fully expected it would rupture externally, but fortunately this did not occur.

These pressure symptoms at the later period of the man's illness upon different vital organs were very evident; some difficulty of swallowing, faintness, compression of the lung, and vomiting, presumably from pressure upon stomach; venous engorgement and edema were very pronounced; his circulation was feeble, and consequently he was very lethargic; whilst at times he took fluid nourishment fairly well, on the whole his appetite was very bad. One of the greatest trials experienced in the nursing of this case was the difficulty in obtaining an action of the bowels, as being absolutely incapable of movement, every ingenuity had to be practised to gain this end.

Another matter, of which at first I was very sceptical—was this—I noticed the tumor was always covered by a red handkerchief underneath the sheet (he had no other covering on, because the weight of the bed clothes gave him pain). I enquired the reason, and was told that when any red colored material covered it, the pain was less severe. I thought it was mere fancy on his part, and surreptitiously removed it upon several occasions, but absolutely without exception if any other colored handkerchief was substituted he could in a few minutes discover the difference. This was practiced purposely many times, with always the same result. At first I gave very little credence to it, but certainly the rays of light did have an effect upon the part, and as these were altered by the red handkerchief interposing so he had relief.

IF a patient complains of sharp pain in the big toe, examine the urine for albumin or sugar in order to exclude a diabetic or nephritic condition.

ALWAYS examine a child suffering from chorea for the presence of adenoids. The removal of the growths in the back of the pharynx may cure a mild case.

INCREASING deafness and blindness should suggest an intracranial tumor, especially if facial palsy be present. The commonest situation is in the cerebello-pontine angle.

THE chief causative factors in peripleuritic abscesses are actinomycosis and typhoid osteomyelitis. A careful history as to a previous typhoid and a thorough microscopic examination of the pus should be secured.—*American Journal of Surgery*.

A Case of Acute Lymphatic Leukemia. By CLAUDE JOHNSON, M.B., Ch.B., Resident Medical Officer, the General Hospital, Birmingham, in *Birmingham Medical Review*.

The patient, a boy, aged 2 years, was brought to the General Hospital, Birmingham, on October 26th, 1908, and was admitted under the care of Dr. Stanley Barnes, to whom I am indebted for kind permission to publish the case.

The patient was a well-developed boy, and had had no serious illness. The present illness began about one month before admission to the hospital, and the first sign of disease that was noticed was a swelling in the left side of the neck. As he was treated at the Queen's Hospital at that time we may presume that there was no general glandular enlargement one month before the patient's death, so that the disease was very acute in its course.

On admission to the hospital there was found to be a large tumor in the region of the left parotid gland. The lymphatic glands of the neck and in the axillae and groins were markedly enlarged, discrete, and hard to the touch. The skin showed many petechial hemorrhages. There was also bleeding from the gums.

On examination of the thorax, there was a large area of dullness extending from the suprasternal notch down the sternum to the level of the fourth costal cartilages, and reaching for a short distance each side of the sternum. This was considered to be due to enlarged mediastinal glands, or to a large thymus. On examination of the abdomen the flanks were noticed to be bulging. The spleen was large and extended about two inches below the left costal margin. It was firm, moved on respiration, and its anterior edge felt very sharp. The liver was considerably enlarged. A tumor could be felt in each flank, which subsequently was shown to be an enlargement of the kidney. The child appeared very pale; there was a large quantity of blood passed per rectum, and also a little was coughed up. The urine was found to contain blood. The blood count showed that there were 1,200,000 red cells, and 517,000 leucocytes per c.mm. The leucocyte consisted chiefly of large lymphocytes; there were relatively few polymorphonuclear cells, and no myelocytes were present. There was a marked degree of poikilocytosis, and many of the red cells were nucleated. The patient gradually became worse after admission, and died suddenly on October 31st.

At the *post mortem* examination a great increase was found in the lymphoid tissue all over the body. An enormous glandular mass

hung down in front of the pericardium. The thymus was very large. There was a slight excess of turbid fluid in the pericardial sac, and numerous petechial hemorrhages were present under the pericardium. The heart muscle was pale and soft, and the valves appeared normal. The lungs showed slight bronchopneumonia. The mediastinal glands were greatly enlarged. There was considerable enlargement of the mesenteric glands, which were very pale, and showed no caseation. The mucous membrane of the intestines was pale, and there was slight enlargement of Peyer's patches. The liver weighed 21 oz., and was large and pale; the pancreas appeared normal. The kidneys, which were enormously enlarged, and weighed 9 oz. each, appeared very pale, with prominent venae stellatae. On section there was marked enlargement of the cortex, with extreme pallor. Numerous areas of hemorrhages were scattered throughout the cortex. The supra-renal glands were normal. The spleen, which weighed 4 oz., was enlarged, firm, and pale, being uniformly colored. The brain appeared normal. Both middle ears contained a considerable amount of glairy fluid. The bone marrow of the shaft of the femur was pale in color and creamy in consistence.

Microscopical Examination.—All the lymphatic glands showed enormous hypertrophy of lymphocyte-forming tissue. In the kidneys the tubules and Malpighian tufts were widely separated by an infiltration of lymphocyte-like cells, contained in a fine reticulum of young fibrous tissue. Numerous hemorrhages were to be seen scattered throughout the cortex and medulla. Soudan III. preparations showed a small amount of fatty change in the cells of the convoluted tubules. In the lungs there was a slight amount of catarrhal pneumonia. Masses of cocci were here and there present in the alveoli. In the spleen no distinct boundary was seen between the Malpighian bodies and the pulp. The latter was infiltrated with lymphocytes. There were also numerous small hemorrhages. The liver showed no abnormal changes. In the bone marrow films there were a large number of lymphocytes with numerous red cells, both nucleated and non-nucleated forms being present.

PERSISTENT hemorrhage after the extraction of a tooth is often relieved by the application of trichloroacetic acid. If the hemorrhage does not cease after its application, tamponade of the cavity is the next best available means of stopping the flow of blood.—*American Journal of Surgery.*

Report of a Case of Acute Pancreatitis. By JOSEPH B. BISSELL, M.D., New York, Surgeon to Bellevue and St. Vincent's Hospitals; Consulting Surgeon to Hospital for Deformities and Joint Diseases, etc., in *International Journal of Surgery*.

Acute pancreatitis is a comparatively rare disease; still the busy practitioner and the operative surgeon are always likely to meet this condition in their daily work. Its infrequency is not so great but that we must always bear it in mind when called upon to consider a case of profound and constant pain in the upper abdomen, where severe collapse is a predominating symptom. Undoubtedly, as is the case in all infrequent diseases, if we knew more about its characteristics a large number of cases of acute hemorrhagic pancreatitis would be upon record.

The following case, occurring in my service at Bellevue Hospital, is so typical in its symptoms and also in the difficulty of diagnosis, that it seemed worthy of being reported.

C. S., aged twenty-nine, native of the United States, barber by occupation, was admitted December 19, 1907. His previous history was indifferent. He had had no similar attacks preceding three days ago. His present illness began about 2.30 p.m., with an attack of pain in the epigastrium, which he attributed to some kidney stew he had eaten at noon. Within a half hour after the pain began he was suffering from a severe and continuous colic, but continued to work until 8 p.m., although the pain was practically constant. At 11 o'clock at night he was suffering so much pain in the upper abdomen that he called in a physician, who gave him morphine. He slept from 12 to 2, when the pain was so severe that the physician was again called and gave him another hypodermic, with only slight relief.

The patient described the pain as in the right abdominal region extending over the epigastrium and down to McBurney's point. This pain was pretty constant. He had not vomited, nor did his bowels move, although his physician employed enemas and lavage.

On examination at the hospital his general complaint was abdominal pain, fullness and obstipation. His general appearance was that of a man about thirty-five years old, well developed and well nourished. The face was pinched, the tongue dry, the breathing labored, and he appeared quite ill. The pupils were dilated, but reacted to light. His pulse was 90, regular, small in volume, and increased in tension; the arteries were normal. The abdomen was distended. There was moderate rigidity on the entire right side;

dullness or flatness on the right half of the abdomen. Points of tenderness were most marked just below the xiphoid appendix, one inch to the right, and over McBurney's point. The liver was not palpable, the area of liver dullness about normal. There was some flatness extending on the right side toward the right axillary line. The spleen could not be felt. The urine contained a moderate amount of albumin, considerable sugar, but otherwise it was normal. Blood examination made on the morning of the 19th showed 14,000 leucocytes and 80 per cent. of polymorphonuclears.

The patient lay in bed huddled up with his knees drawn toward his chin and both hands over his upper abdominal region. As there had been no movement of the bowels, as pain was not controlled by the use of morphine or the other means which had been employed to relieve the distension of the abdomen, and as his general condition seemed to be rapidly growing worse, it was decided to do an exploratory laparotomy.

Operation.—The usual incision along the right rectus muscle was made through the abdominal wall, about three inches long, down to the outer edge of the sheath of the rectus, the muscle retracted toward the left, and the peritoneum entered behind it. Large quantities of dark fluid were expelled as soon as the peritoneum was opened. The appendix was brought into view and found to be normal. The cecum and ascending colon seemed large, congested, black in some places, and of an ashen hue in others. The abdominal incision was extended upward parallel with the right rectus muscle. White and ashy looking spots were noticed in the abdominal fat. The omentum was very much congested and firmly adherent in all directions to the transverse colon, liver, etc. Attempts were made to break up some of these adhesions, and after this was done the organs almost immediately assumed a more normal color. A large hematoma was found just below the upper fold of the right hepatic flexure, and its contents, about sixteen ounces of fluid blood, evacuated. The omentum was now more freely separated from the under surface of the liver. The gallbladder appeared normal, but the common duct was thickened and congested, and there was found just posterior to its entrance into the duodenum a large pulpy mass which was taken to be the head of the pancreas. This cleared up the diagnosis, making the case one of acute hemorrhagic pancreatitis. The abdomen was drained with three large rubber tubes, the first running down nearly to the head of the pancreas, the second to the side of the hematoma, which had been opened, and the third to the region of the appendix. The wound was closed around these drains.

The patient did not recover from the shock, and died within

twelve hours after returning from the operating table. The autopsy showed the following:

Autopsy Findings.—The body is that of a large male, muscular, well developed and well nourished. The skin of the face and body is somewhat pale. No edema of the extremities is present. The panniculus adiposus is well developed. The peritoneal cavity is free of fluid. The intestines are not distended, but as seen through the serosa are in places mottled bluish, though not extensively so. The lumen of the large and small intestines is everywhere open, there being no constrictions or adhesions in the peritoneal cavity, except recent ones between the diaphragm and the upper pole of the spleen. The omentum is large and fatty, and no areas of fat necrosis or other gross lesions are present. Between the transverse colon, the pancreas and the mesenteric fat there is seen an extensive amount of hemorrhagic infiltration, having a chocolate brown color. In some places the peritoneal surface of the infiltrated tissues is covered by a delicate, grayish-white layer resembling an exudate.

The autopsy was restricted to an extension of the surgical incision. The lungs, liver, heart and all the other organs were removed in toto.

Lungs.—No adhesions of the lungs are present; apparently no fluid in the pleural or pericardial cavities. Both lungs are well aerated; the lower lobes are markedly congested and appear somewhat compressed, that is, unaerated. No evidences of bronchopneumonia exist, except for a small patch in the right lower lobe, about 4 mm. in diameter. The bronchi are congested.

Heart.—The heart is normal in size; the valves normal. The cardiac muscle is slightly pale, has a cooked-flesh appearance, and in places appears slightly mottled red. The aorta, throughout its entire length, is normal.

Liver.—The liver is large, and in places on the superior surface of the serosa there is a delicate layer of fibrin. Its color is pale yellowish. Over the superior surface there are a number of subcapsular hemorrhage areas, the largest being 2 by 1 inch in breadth and somewhat sunken beneath the surface. On section the liver has a decidedly cooked-flesh homogeneous appearance, with areas, however, which are reddish in color, as if hemorrhagic. The gall-bladder is distended and contains dark, tarry bile. The cystic and common bile ducts are patent, bile appearing at the ampulla on pressure upon the gall-bladder. There are no stones or concretions in the common or cystic ducts, or in the gall-bladder. The hepatic ducts are open. The mucous membrane of the common bile duct is normal in appearance and slightly bile stained. The pancreatic duct

empties separate from the common bile duct, just below the inner side of the latter in the ampulla. The pancreatic duct is patent at its external orifice, and on following the duct it is found to be of normal width and contains brownish yellow fluid. The peripheral fat tissue shows extensive fat necrosis. The portal vessels are normal.

Pancreas.—The pancreas is enlarged, especially the head and the main part of the organ. On section it is firm. The parenchyma of the organ has a fleshy pink appearance. The interlobular septa everywhere are thickened, necrotic, and a grayish-white. The tail of the pancreas shows extensive hemorrhage infiltration and fat necrosis; the head is brownish in color, soft and necrotic, and greasy to the touch. The peri-pancreatic fat is everywhere infiltrated with blood. The mesenteric lymph-nodes are small and exceedingly pale.

Stomach.—The organ is slightly distended; its mucous membrane covered with a slightly increased amount of mucus, and the seat of extensive ecchymotic extravasations. Post-mortem changes are considerably advanced. The duodenum is everywhere normal and bile-stained.

Intestines.—The jejunum and ileum are normal. The lowest Peyer's patches show pigmentation by hydrogen sulphide. The large intestine is everywhere normal; practically no fecal material is found. The small intestine is in places stained black by bile, and contains only a very small amount of mucus, which is adherent to the mucosa.

Kidneys.—The fat is extensive, and over both kidneys, especially the right, is extensively infiltrated with blood, and at its upper pole the fat is likewise the seat of fat necrosis. The kidneys are about normal in size, extremely pale on the surface and on sections; the cortex is thickened, the capsules non-adherent; the pelves and ureters normal.

Bladder.—This is moderately filled with urine, and the mucosa appears normal.

Spleen.—Recent adhesions are found binding the upper external surface of the spleen to the diaphragm. The capsule is wrinkled, the organ being about normal in size. It is somewhat firm to the touch, homogeneous on section, and there are a few small congested or hemorrhagic areas in its substance.

Adrenals.—Both adrenals are small. The cortex thin and pale yellowish in color; the medulla not hemorrhagic and narrow.

Anatomical Diagnosis.—Acute hemorrhagic pancreatitis with fat

necrosis of the pancreas, peri-pancreatic and peri-renal and peri-portal tissues. Degeneration of the liver, kidneys and heart.

The etiology of acute pancreatitis is of very little help because of its indefiniteness. Several observers have made a point of the fact that at autopsies in these cases bile is usually found in the pancreatic duct. Whether this condition is a result of the disease or a cause of it is not so clear. W. S. Thayer is quite sure that pancreatitis following biliary colic is brought about by the bile or some of its salts or a gallstone being carried into the canal of Wirsung and thus on into the pancreatic duct.

If that is the case biliary colic should be considered as one of the conditions which might lead to acute pancreatitis. On the other hand, there are many of these cases in which there was no preceding biliary disorder as far as known. Usually the acute, sharp, profound, distressing and almost prostrating pain referred to the xiphoid appendix, and running toward the right side of the abdomen, is the first symptom of the disease. The presence of fat necrosis does not help us very much until we make an exploratory laparotomy, and then, as was seen in this case, suspicion is at once directed to the pancreas as the cause of the trouble.

As to treatment, after a probable diagnosis has been made, an exploratory incision is at once indicated. Laparotomy in the upper median abdomen is performed as rapidly as possible; an opening is made down to the pancreas, and a cigarette drain is inserted down to the head of the pancreas and passing out at the abdominal wound. The remainder of the treatment consists in endeavoring to build up the patient's condition so that he may resist as far as possible the severe inflammatory and hemorrhagic necrosis of this organ.

The writer has no operative suggestion to offer, and wishes merely to place on record this case as a help to others who in the course of their own work may meet with similar conditions.

46 W. 55th St., New York City.

A fecal fistula may be made to heal more quickly by the application of the actual cautery.—*American Journal of Surgery*.

PERSISTENT bleeding or irregular prolonged menstruation is very suggestive of uterine fibroids.—*American Journal of Surgery*.

A sinus leading high up in the axilla and discharging a moderately clear fluid may communicate with the shoulder joint or pleura.—*American Journal of Surgery*.

A Case of Rupture of the Rectum Caused in an Unusual Way.

By C. L. FRANKLIN, M.B., Ch.B., Vict., Senior House Surgeon,
Oldham Infirmary, in *The Lancet*.

A lad, aged 17 years, was admitted into Oldham Infirmary last June, with a history of having been crushed between the "roller beam and the mule" at a cotton mill.

On admission he was in an apparently moribund condition, suffering from shock and severe hemorrhage from the rectum. The rectum was firmly plugged with gauze and the hemorrhage ceased, saline solution was infused into the median basilic vein, and the usual treatment for hemorrhage carried out. However, the patient died within two hours of admission. The only marks of external injury were slight contusions in the left hypochondriac region and over the forehead. At the postmortem examination the pelvic peritoneal cavity was found to contain a large quantity of blood. There were a slight laceration of the liver and a vertical tear on the anterior surface of the rectum three-quarters of an inch in length and situated at a distance of three and a half inches from the anus. There was no fracture of the pelvis, sacrum, or coccyx, nor sign of injury about the region of the anus. The other organs were normal. The gauze packing was projecting into the peritoneal cavity through the rent in the rectum. The main interest of the case lies in the possibility of a rupture of the normal rectum from increased abdominal pressure. Cases of vertical rupture of the rectum due to straining in order to pass hard scybalous masses have been recorded, but in these cases the rectal walls are undoubtedly abnormally thin and ruptured without great difficulty.

I am indebted to Mr. A. H. Godson for permission to publish this case.

Oldham.

LARGE intraabdominal abscesses are often better drained by making a counter-incision in the lumbar region.

ORCHITIS after an operation for hernia is best relieved by wet or glycerin dressing with elevation of the scrotum.

WOVEN silver wire for suture material in a recurrent hernia will often succeed when all other means fail.—*American Journal of Surgery*.

Therapeutics.

Mercury in the Treatment of Syphilis.

An English army medical officer, who has had a very extensive experience in the treatment of this disease, and under circumstances permitting the treatment to be conducted over long periods of time with regular inspection and careful watching of all the steps necessary and the results that occur, is decidedly of the opinion that the older methods of treatment by mercury in the form of pills, or its use by inunctions are bound to be supplanted by the intramuscular injection of the drug.

By intramuscular injection the effects are much more certain and positive; the amount of the mercury can be evenly and nicely graduated, and the patient can be continued under that close observation which is eminently requisite where the course of attention must be prolonged and the highest degree of faithfulness on the part of the patient insured.

The most considerable obstacles to the general acceptance of the method on the part of the profession are stated to have been the difficulty of breaking away from the old methods—getting free from routinism; the lack of knowledge of the necessary technique; and the alleged dangers that have been advanced by some opponents.

The first obstacle is common to all new facts and procedures.

The second need not long apply, inasmuch as the steps are not difficult or intricate.

Thirdly, it is affirmed that in an experience extending over 3,000 cases, requiring upwards of 60,000 injections, not a single unfortunate result was observed, such as local abscesses, mercurial stasis, salivation or emboli.

The different salts of mercury have been used in varying strengths, by different observers, and by the same workers, in the endeavor to find the best under any and all circumstances. One of the most popular forms has been the salicylate of mercury, which has been in especial favor in Germany and France. It has been used in a solution of oil of almonds, in the proportions of 1 to 10; cocaine being added to prevent pain. The chief objection to this preparation is its slowness of action.

Metallic mercury is preferred by Lambkin, who uses it in the form of a cream, made up with lanoline. His formula is as follows:

R Hydrarg. ʒss.
 Adipis lane anhyd. ʒii.
 Paraffin. liq. (carbolyzed 2 per cent.)
 ad. ʒv. by volume.

The finished product equals one grain to ten minims; and ten minims in the maximum dose once a week.

The writer above mentioned holds that the use of the insoluble preparation named possesses distinct advantages over the soluble salts in the slowness and uniformity of absorption. He says: "After being injected into muscle it remains *in situ* for a considerable time, and is very gradually, evenly, and slowly absorbed. It is to this that it owes its great and lasting influence on the disease."

Considerable care is necessary in making up the cream of mercury that is recommended to be employed, and which is now generally used in the British army. Instructions in detail appear thus:

The dispensing of this cream is of great importance. In compounding it, the mercury and lanoline ought to be rubbed up together in small quantities in a glass mortar until every particle of the former can no longer be seen. This trituration is tiresome, as it will ordinarily take two hours, but it is absolutely necessary. When the whole amount has thus been treated, then, and not until then, is the paraffin, liq. carbol. added to it; having been well stirred up the cream is poured into a specially-made glass-stoppered bottle; the latter has a very wide mouth to allow of the syringe being filled without again removing the cream. All angles of the bottle have been rounded off so as to prevent any chance of the mercury collecting there. The cream requires no further sterilization; being already sterile it is kept so by the carbolic acid it contains. Before being used it ought to be well stirred up with a glass rod, which latter has been previously dipped in boiling olive oil.

In connection with the mercurial cream two difficulties must be mentioned and carefully noted: (1) that in cold weather (the winter in England) it becomes semi-solid, rendering it too thick to be passed through the lumen of the needles; this can easily be remedied by placing the bottle containing it in a warm-water bath at a temperature of 90 deg. (the latter being indicated

by a thermometer placed in the bath); (2) in the tropics and subtropics, in fact when the temperature of the air reaches 90 degs. the reverse happens, and unless artificial means are taken to prevent it, the three constituents of the cream are apt to separate, the mercury naturally falling to the bottom. This defect can also be easily overcome by the following measures: When such a temperature exists, the bottle of cream is always to be kept in the ice chest: when required for use it is taken out and placed in a vessel containing crushed ice. Then by stirring it can be brought to the required consistence.

The gluteal region is evidently best fitted for the injections, which should be made intramuscularly, and every reasonable precaution should be taken to render the operation as aseptic as possible.

While there is a standard of dosage, as above stated, yet as always in medicine, the quantity used must vary up or down according to the case, and according to close observation.

The duration and continuity of the treatment likewise varies. But beginning with the acute manifestations of the disease weekly injections may be maintained until they subside (usually from six weeks to two months), then the injections may be given once every two weeks for three months, when there may be an interval of one or two months without treatment, followed by another course of fortnightly injections extending over a period of three months, with another rest.

Subsequently stated examinations will determine the periods of rest and periods of treatment, but the patient should not be discharged until he has passed over a period of at least one year without manifesting any evidence of a return of the disease.—*Clinical Review.*

THE blood should be examined in all cases of gangrenous gingivitis for evidences of acute lymphatic leukemia.

BILATERAL swelling of the knee joints without pain, in a child, is due either to syphilis or tuberculosis, more likely the latter.

A moderate prolapse of the rectum with hemorrhoids may possibly be relieved by the treatment of the hemorrhoids with clamp and canterly.

A large tumor supposedly a growth of the ovary may be a retroperitoneal mass, usually a sarcoma, having no connection with the sexual organs.—*American Journal of Surgery.*

Physician's Library.

Cohnheim—"Diseases of the Stomach"; Winter and Ruge—"Gynecological Diagnosis"; Packard—"Diseases of the Nose, Throat, and Ear"; Piersol—"Anatomy"—have been received from the J. B. Lippincott Company, Philadelphia and Montreal, and will be reviewed in our March number.

A Text-Book of General Bacteriology. By EDWIN O. JORDAN, Ph.D., professor of bacteriology in the University of Chicago and in Rush Medical College. Octavo of 557 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Agents for Canada: J. A. Carveth & Co., Limited, Toronto. Cloth, \$3 net.

In introducing this book to the medical profession, the author tells us that it is the outgrowth of lectures he has given to medical students in the University of Chicago, during the past few years. The book will prove an excellent working handbook for the medical student, whilst those general practitioners who wish to keep abreast of the times in scientific medicine will find it of the greatest value. It is for such that the book has been written and published, as no pretensions are made as to a complete exposition of the entire subject of bacteriology. In it the busy practitioner who in the course of an arduous practice, does not wish to entirely go to seed, will find just those practical aids and helps which will keep him practically in touch with what is going on in the world about him. The biographical notes will enable the investigator to pursue each subject further.

An unusual feature of medical journalism will be presented in the March issue of the *American Journal of Surgery*. The entire original subject matter in this issue will be contributed by New York City surgeons of note, and a number of new operations will be first presented therein. Among the contributions to appear are: "A New and Simple Method of Intestinal Anastomosis (Illustrated)," Howard Lilienthal, M.D., Attending Surgeon, Mt. Sinai

Hospital; "Sigmoiditis and Perisigmoiditis," James P. Tuttle, M.D., Professor of Rectal Surgery, N.Y. Polyclinic, New York; "Sacral Suspension of the Uterus—A New Technic" (Illustrated), James Van Doren Young, M.D., Surgeon, St. Elizabeth Hospital, New York; "Cancer of the Breast," Willy Meyer, M.D., Professor of Surgery, Post-Graduate Medical School; Attending Surgeon of German Hospital, New York; "A Modified Operation for Inguinal Hernia" (Illustrated), Albert E. Sellenings, M.D., New York; "The Localization and Removal of Foreign Bodies, with Especial Reference to those in the Skeletal Tissues" (Illustrated), Dr. Walter M. Brickner, Assistant Adjunct Surgeon, Mt. Sinai Hospital; Editor-in-Chief, *American Journal of Surgery*, New York; "An Operation for Direct Blood Transfusion, With a Description of a Simple Method," John A. Hartwell, M.D., Attending Surgeon to Bellevue Hospital, New York; "Plastic Mastoid Operation; A New Method of Operating in Acute Mastoiditis," T. F. Hopkins, M.D., Assistant Surgeon Oral, N. Y. Eye and Ear Infirmary, New York; "Dislocation of the Cervical Vertebrae," (Illustrated), James P. Warbasse, M.D., Special Editor, *American Journal of Surgery*, Attending Surgeon to Seney and German Hospitals, Brooklyn; "Surgery of the Pericardium and Heart," H. Beekman De Latour, M.D., Attending Surgeon to St. John and Norwegian Hospitals, Professor of Clinical Surgery, Long Island Medical College; "Fibrosis Uteri and Its Surgical Treatment" (Illustrated), S. W. Bandler, M.D., Adjunct Professor of Gynecology, N. Y. Post-Graduate Medical School; "Laryngeal Stenosis in the Adult, Successfully Treated by Intubation," William K. Simpson, M.D., Professor Laryngology, College of Physicians and Surgeons, New York.

The Canadian Medical Protective Association

ORGANIZED AT WINNIPEG, 1901

Under the Auspices of the Canadian Medical Association

THE objects of this Association are to unite the profession of the Dominion for mutual help and protection against unjust, improper or harassing cases of malpractice brought against a member who is not guilty of wrong-doing, and who frequently suffers owing to want of assistance at the right time; and rather than submit to exposure in the courts, and thus gain unenviable notoriety, he is forced to endure black-mailing.

The Association affords a ready channel where even those who feel that they are perfectly safe (which no one is) can for a small fee enroll themselves and so assist a professional brother in distress.

Experience has abundantly shown how useful the Association has been since its organization.

The Association has not lost a single case that it has agreed to defend.

The annual fee is only \$3.00 at present, payable in January of each year.

The Association expects and hopes for the united support of the profession.

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Dominion Medical Monthly

And Ontario Medical Journal

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Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 293 Beverley St., Toronto, Canada

VOL. XXXII.

TORONTO, FEBRUARY, 1909.

No. 2.

COMMENT FROM MONTH TO MONTH.

Psychiatry in Ontario is being well promoted, as is evidenced in the October issue of the *Bulletin of the Ontario Hospitals for the Insane*. The October (1908) issue is just to hand and deals exclusively with the London Hospital for the Insane. From it we gather there has been a distinct step forward in that institution during the past year, in the transformation of the hospital for medical and surgical diseases, erected on the grounds some six years ago, into a Reception Hospital for the observation and treatment of all patients on first entering the institution. This Reception Hospital has accommodation for sixty patients; and it is significant that there is scarcely any evidence present of restraint. It is well manned as to its nursing staff. Sixteen of the best experienced and best trained nurses in the institution comprise this staff, a ratio of 3.75 patients to one nurse, thus ensuring individual care and nursing of all patients. It is pleasing to note as a special feature that the old improperly applied words "lunatic" and "asylum" to patient and institution have been pushed into limbo themselves and there to be forever locked up for keeps, and only

the hospital idea kept steadily in view. That the inauguration of this Reception Hospital in connection with the London institution has proven its justification seems to be assured, as the expectations that many of these cases would never commingle with the chronic insane, are being realized. Patients showing improvement in the hospital proper are also transferred to the Reception Hospital to participate in the better facilities there for treatment. It is gratifying to know and record that these patients are treated nowadays as other people who may be sick with any disease of any other organ of the body, and that those persons afflicted with diseases of the brain—as well as their friends and relatives—have not to bear a certain amount of stigma, which formerly and most unjustly and foolishly attached to all thereto associated. The fact is emphasized upon patient and nurse that the patient is ill with one of the various diseases which may attack the cerebral organ. In the treatment, rest and hydrotherapeutic measures have superseded the employment of sedative and hypnotic drugs, while open air treatment, military drill and physical culture exercises, combined with intelligent handling of the patients and careful consideration of all cases, would lead one to say that persons with mental diseases are now treated scientifically and not empirically. Man's brain is an organ of an intrinsically complex mechanism, dependent for its proper functioning on subordinate organs, as the heart, lungs, kidneys, stomach, etc. It is his strongest weapon of defence, as the sting is to the adder, the talons to the eagle, the horns to a bull. When becoming diseased, it is the organ of the human body which should superlatively command the best scientific and most intelligent treatment. A new era has dawned in the management of these diseases. May we look for much in its intelligent application.

Some of Our Oldest Remedies taking on new properties is one of the curious circumstances in the ever diligent search after new and possibly better modes of treatment of disease. A few months ago we reverted in these pages to the employment of Epsom salts in the treatment of burns and inflammatory dermatoses. Other

properties of this ancient and common purgative seem to be coming to light. Several years ago Professor Meltzer discovered that the salt when injected intraspinally had an anesthetic action, but the method for anesthetic purposes did not prove applicable, owing to the length of time the anesthesia took to develop. The announcement, however, developed a new train of thought. Dawburn, of New York, has referred to its use as a means of preventing shock, in neurotic cases. In the *American Journal of Medical Sciences*, December, 1908, Dr. R. T. Miller, of Johns Hopkins Hospital, collected eleven cases where Epsom salt had been employed intraspinally in the treatment of tetanus. He recorded that in three out of eight cases, where it had been employed in this manner, there had been recovery, while in all the remaining three, where it had been administered by subcutaneous infusion, recovery was noted. Another was added to these collected cases by Dr. Miller, where a cure followed eleven lumbar punctures with injection of a 25 per cent. solution into the meninges in the course of thirteen days—but in this case the tetanus antitoxin was used as well. As seen from Dr. Miller's article, the most striking feature was the complete muscular relaxation noted, enabling the patient to take food and preventing rapid exhaustion. It is not administered, however, without attendant dangers, and a further observation seems needed to determine range of dosage and establish proper technique.

At the Annual Banquet of the Medical Faculty of McGill University the feature of the evening was the presentation to Dr. Roddick, the former Dean, of a bust of himself, executed by Dr. J. J. Ross. In replying Dr. Roddick reverted to the subject of Dominion Registration, with which he has been in the past identified for a number of years. The Dominion Registration Act, Dr. Roddick asserted, still stands on the Statute Books of the Dominion, to be made use of any day by the medical profession of Canada. Six of the nine provinces, he said, are ready to go on with it, while the other three are watching each other, and it only remains for them to get together and put into active operation the machinery he constructed several years ago.

• **Writing to the "Western Canada Medical Journal,"** Dr. G. A. Kennedy, of Macleod, Alberta, says he remembers when this question of Dominion Registration was before the Canadian Medical Association, some thirty years ago. Thus it was many years in the practical politics of the national medical body, but since the Roddick Bill became law it has been removed therefrom, and the question rests with the various licensing bodies. As a step in the direction of its general adoption, Dr. Kennedy tells us that for two or three years there has been a feeling in the West to inaugurate a partial interprovincial registration by the four western provinces. This seems like a good plan and one to be commended. The proposition would be to hold examinations simultaneously at Winnipeg, Regina, Calgary and Victoria, those passing such successfully being qualified to practise in either of the four western provinces on payment of the registration fees of each. This example might facilitate Dominion Registration, and Dr. Kennedy urges a meeting at Winnipeg during the gathering of the Canadian Medical Association in August, of representatives from the four medical bodies of the western provinces.

The Western Canada Medical Association is said by the *Western Canada Medical Journal* to be the great desire of those interested in the medical progress of the West. This of course means a medical association formed from the members of the profession in Manitoba, Saskatchewan, Alberta and British Columbia. It is feared in some quarters that if such a society be inaugurated that it might be detrimental to the national medical body—the Canadian Medical Association. While at the present time the C. M. A. is endeavoring to consolidate the medical profession of Canada and to have its various provincial societies affiliated with the parent body, there should be a united and earnest effort to accomplish that end and to do it quickly and effectively. The West, like the extreme East—and there they have the Maritime Medical Association, in addition to their provincial medical societies—can scarcely expect to have a meeting of the Canadian Medical

Association more often than every seven or eight years, though the ever increasing population and development of that great country may, in the near future, act more strongly as a determining cause for a less space of time between meetings. In the meantime, if the West desired a Medical Society of their own to embrace the four provinces, to come together in annual session, the inter-communication between its members would be sure to act rather to the good welfare of the national medical body than otherwise.

There are a great many who believe, in order to consolidate the medical profession of Canada, that an official journal is essential. Others have pointed out the difficulties and expense attached to such an undertaking. Some advocate a "Weekly," others a "Monthly," without probably giving due consideration as to where the money is to come from. No one has yet solved this difficulty. While it would seem fitting for a national medical body to have an official journal of its own, it must be remembered that we have but a limited field in Canada, and that there are such necessary things, as subscriptions to collect, advertisements to secure, and printer's bills to pay. To float a "weekly" journal would require an amount of financial aid none of us at the present time would care to think about. It is very doubtful if a "monthly" would be in keeping with the dignity of a national medical body.

Calmette's Tuberculin Reaction was first introduced to the medical profession in June, 1907. This ophthalmic test for tuberculosis has attracted considerable and wide attention. It was a new method for the diagnosis of tuberculosis, and being somewhat easy of application, was probably used altogether indiscriminately. Originally, Dr. Calmette claimed it was easy of application, reliable and harmless. As to it being easy of application there are no two opinions, as all one has to do is to place a drop of tuberculin solution in the conjunctival sac of one eye. C. Christopher Heywood, M.B., in *The Medical Chronicle*, says in his 127 cases that 56 gave a positive reaction and 71 negative. This reaction manifests itself variably from four to sixty hours, and to some extent depends upon

the strength of the solution employed. Even with the one per cent. solution originally suggested by Calmette there has been noticed excessive inflammatory reaction. Dr. Heywood with his first 25 cases used a .5 per cent solution, but now always .1 per cent. solution. From this his results are satisfactory. Usually the reaction appears in from six to eight hours, whilst the inflammation subsides from four to five days on the average, although it has been prolonged to six weeks. Few complain of pain with the .1 per cent. solution, and the discomfort has never interfered with sleep or the appetite.

As to its harmlessness, Dr. Heywood states it is risky to instil the solution into an eye already inflamed, and before doing so both eyes should be in a healthy state. The necessity for this is evident. A second instillation is not safe until a considerable period has elapsed. One serious consequence which may supervene is the development of phlyctenular ulcers. Some have ceased using the reaction, owing to the disastrous results following, which may have been due to a too strong solution of instillation into the same eye too soon.

The most potent thing about the test is, is it reliable? Of the definitely tuberculous cases of Dr. Heywood, thirty-seven, 89.18 per cent., gave a positive reaction, and 10.82 a negative one. These do not come up to results secured by Dr. Stephens, in the B. M. J., who only had two failures out of 106 definite tuberculous cases. It seems to be established that cases *in extremis* do not react, but then, in that class of cases, the reaction would not be considered a valuable discovery. Of Dr. Heywood's twenty doubtful cases, thirteen gave a positive reaction, although in his opinion the series were probably all tubercular. There were seventy cases thought not to be tubercular. Of these ten gave a positive reaction, namely, seven choreas, one acute rheumatism, one diabetes, and one chronic diarrhoea. Of the sixty cases showing a negative reaction, there was no suspicion of tuberculous disease. Whilst the test is considered by no means infallible, it is considered a valuable help in diagnosis, as the negative result is probably more reliable than the positive, except in moribund cases. In an obviously tubercular case it is a very bad prognostic sign.

Public Health Notes.

Medical Inspection of Schools in Montreal.—In regard to the general results obtained from the medical inspection of schools in Montreal during the month of September, 1907, the following table will possibly afford some useful information:

Diseases found in schools during the month of September, 1907:

Number of pupils attending schools.....	49,360
Badly nourished	1,565
Inflammation of the glands	1,661
St. Vitus' Dance	22
Heart troubles	55
Lung troubles	76
Skin diseases	399
Deformity of the vertebral column.....	85
Deformity of the limbs	215
Deformity of the chest	125
Defects of vision	1,333
Defects of hearing	267
Conjunctivitis	272
Trachoma	3
Difficulty in nasal breathing	986
Decayed teeth	13,385
Enlarged tonsils	3,825
Adenoids	1,466
Diphtheria	3
Scarlet fever	10
Measles	4
Smallpox	0
Whooping cough	3
Mumps	6
Chicken-pox	4
Erysipelas	0
Pediculosis (lice on head)	3,656

Scabies	125
Impetigo	50
Ringworm	93
Penphigus	1
Worms	1
Abcess	1
Children sent away owing to infectious diseases at home	17
Neurasthenia	1
Headache from study	257
Children dismissed on account of uncleanness....	124
Goitre	2
Hypertrophy of uvula	8
Total number of children requiring treatment.....	30,133
Number of children in good health.....	19,227

Total number examined 49,360

From the above table it will be seen that 60.37 per cent. of pupils attending schools in the city of Montreal required some description of medical, surgical or dental treatment. In New York City the proportion of defective children is still higher than it is in Montreal, amounting to 70 per cent.

A Laboratory for Hamilton, Ontario, was discussed recently at a joint meeting of Board of Health, the Hospital Board and members of the Hamilton Medical Association. A committee was appointed to wait on the Hamilton City Council to see if a grant towards the equipment could be secured. A deputation was appointed to wait on the Ontario Government to secure aid for the purpose.

A Consumption Sanatorium for London, Ontario, was discussed by Dr. R. W. Bruce Smith and Dr. Chas. A. Hodgetts, on the 11th of January, with members of the London Hospital Board and the Hon. Adam Beck. The Hospital authorities were impressed

with the desirability of using a part of the present contagious diseases building for the more serious cases of consumption. It is said the Ontario Government has intimated it will be prepared to make a substantial grant to the care of patients in the proposed sanatorium. Some \$4,300 of \$20,000 required for the purposes of a sanatorium have been subscribed.

Until Vaccinated, some two hundred pupils of the Kingston public schools will be debarred from attendance. The Board of Education has decided only to allow those unvaccinated to attend school who present certificates of physical unfitness for the operation.

Montreal's Typhoid Death Rate per 100,000 of the population for the past five years was as follows: 1903, 31.45; 1904, 31.89; 1905, 18.11; 1906, 37.08; 1907, 33.26. The Montreal Medico-Chirurgical Society is in co-operation with the French Medical and Engineering Society in securing a pure water supply for that city.

Vancouver Health Authorities report that the death rate in that city during 1908 was four per cent. lower than in 1907, the former being 9.816, the latter 13.059. The health department, under Dr. T. F. Underhill, conducted an active campaign against all cases of contagious diseases. The result was 590 cases, against 679 in 1907. The report as regards tuberculosis is partial, but it notes 22 new cases in 1908 and 72 deaths. In the previous year there were 28 new cases, with 69 deaths.

The Ontario Board of Health reports there was a slight decrease in the number of deaths in December, 1908, over the same month in 1907. The total deaths in December were 2,002, a ratio

of 12.6 per 1,000, compared with 2.117, a ratio of 12.9 in December, 1907. There were 118 cases of smallpox, with one death; scarlet fever, 323 cases, 19 deaths; diphtheria, 331 cases, 52 deaths; measles, 40 cases, one death; whooping cough, 72 cases, seven deaths; typhoid, 114 cases, 49 deaths; tuberculosis, 130 cases, 125 deaths.

To Incite to a Study of Tuberculosis amongst the medical students attending Toronto University, Mr. W. J. Gage, treasurer of the National Sanitarium Association, has made an offer to the Medical Faculty of a scholarship to the value of \$100, and a gold and silver medal, to fourth and fifth year students, and graduates of not more than one year's standing, who are best in passing prescribed examinations on this subject.

An Anti-Tuberculosis Society is to be organized in New Brunswick. A committee of medical men and clergymen in St. John have charge of the matter, and they are sending circulars throughout the Province calling a public meeting at an early date. It is proposed to affiliate with and adopt the constitution of the Canadian Association for the Prevention of Consumption and other forms of Tuberculosis. The circular letter is issued over the signature of J. R. McIntosh, M.D., St. John, N.B.

Denial by Mr. Gage of Overcharges at the Muskoka Free Hospital for Consumptives.—Mr. W. J. Gage writes to the Mail and Empire as follows: "In a report of to-day's proceedings of the County Council, I find certain statements made by a couple of members of the Council reflecting upon the Muskoka Free Hospital for Consumptives. These statements are evidently made without a full knowledge of the facts. It is stated by one member that a friend's son is charged fifteen dollars a week, and extra if he receives nursing. Another member,

Mr. Anderson, is reported as making a similar statement. In reply, I would say that no patient, no matter how desirous he might be, would be allowed to enter the free hospital and pay any such charges. If a patient can pay \$7 a week or over he is allowed to enter the Muskoka Cottage Sanitarium, an institution established a mile distant, for pay patients. In the Muskoka Free Hospital all patients are admitted free who cannot afford to pay anything towards their maintenance. In the last weekly report received from the free hospital, dated January 23rd, there are 65 patients in attendance. Of these, 38 contribute nothing whatever towards their maintenance; 4 patients pay \$3.50 a week or less; 4 pay \$4.00 a week; 7 pay \$5.00 a week, and 2 pay \$6.00 a week. These seventeen out of sixty-four patients who pay as above, do so voluntarily—receive no better accommodation than those who pay nothing. Whenever patients can afford to pay some portion of their maintenance, as a rule they prefer to do so, with a commendable spirit of independence. We can make the statement with every certainty of its truthfulness, that no patient is refused admittance into the Muskoka Free Hospital because of his or her poverty, and that under no circumstances would any patient there be permitted to pay such prices as were referred to by the two members of the County Councils."

The Milk Industry of British Columbia is the subject of a report recently issued by Dr. C. J. Fagan, Victoria, B.C., the Provincial Health Officer. Last summer Dr. Fagan was sent east by the Hon. Dr. Young, Minister of Education, to study the methods in vogue in Eastern Canadian and United States cities, in connection with the business of milk supply to the public. Dr. Fagan, in his extensive and exhaustive report, deals with the contamination of milk from outside sources, what bacteria in it do, the legal standards, the causes of contamination, the diseases communicated, as well as on the hints towards educating the producers. He considers that drastic regulations in advance of public opinion would be of little use, and suggests that the points of view of all parties be taken before Government action is taken.

Pulmonary Tuberculosis in 1908. The most conspicuous event in the crusade against this disease during the past year was the meeting of the International Congress on Tuberculosis at Washington. The thousands of professional men who attended it, many of international renown, and all in the interest of preventive medicine, cannot fail to exert an influence which cannot be overestimated. The removal of the exhibits from Washington to New York has resulted in an attendance in this city of 1,000,000 visitors, which is a marked manifestation of public interest in the subject far beyond any previous records. In connection with the Congress, the Bureau of the Census, S. N. D. North, director, has published a paper upon Tuberculosis in the United States, which clearly shows the great necessity for public education. All authorities agree that the most important agency in this crusade is the reporting of cases to the health authorities, and yet, according to Mr. North's report, there were in 1906 only 15 of the 46 States in the registration area where an authentic record of deaths from consumption could be obtained. These 15 States are: Connecticut, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Rhode Island, Vermont, Indiana, California, Colorado, Maryland, Pennsylvania, and South Dakota. Outside of these States are 76 registration cities, which swell the population reported to 48.8 per cent. of the total population of the United States. This state of affairs is nothing short of a disgrace to our own country, and the proposed legislation to remedy this defect should be successful this winter. In the above statement only deaths are recorded, and every effort should be put forth to secure a corroboration or correction of the estimated number of cases, which has been placed at 200,000. If the death-rate fixed in England and Wales, where registration has been established more than half a century, should be accomplished here, it would mean 34,500 deaths. As a matter of fact, our death-rate far exceeds that figure, for nearly 12,000 die from consumption in the State of New York alone every year. If we could know the exact number of cases in the United States it would give us a basis for estimating the results of present methods of treatment. Our own impression is that the diminution of the total number of deaths is chiefly due to the lessening number

of persons infected; but this is only an *impression*. Statistics from sanatoria report a large percentage of cures, but only a small proportion of tubercular patients are yet able to secure admission to these institutions. It is our hope that this new year will show a great growth of registration of deaths and existing cases. If the local health officers everywhere can locate the cases and have facilities for segregating them, the decrease in the spread of the disease will indicate real progress toward the final relegation of consumption to an unimportant position in our tables of vital statistics.—*Medi. Review of Reviews*.

News Items.

DR. GEO. W. ROSS, Toronto, has gone on a visit to Bermuda.

DR. FRANK HALL has been re-elected Mayor of Victoria, B.C.

DR. T. A. BOND, formerly of Maxwell, has located in Shelburne.

DR. DOLBY has returned from the Old Country to Vancouver.

DR. A. R. PERRY, of Conn. is opening up a hospital in Mt. Forest.

DR. ERNEST HALL, Victoria, B.C., is spending the winter in California.

DR. H. D. THOMPSON has purchased the practice of the late Dr. Steele in Shelburne.

DR. PETER McDONALD, of Wingham, Ont., has been appointed postmaster of London.

DR. F. S. SNIDER, Waterford, Ont., has been appointed Sheriff of the County of Norfolk.

DRS. LOUIS and J. E. LABERGE, Montreal, are the honorary presidents of the new Hospital St. Luc, Montreal.

DR. C. A. PAGE, Trinity, '08, formerly of Kingsville, Ont., has returned from Edinburgh and begun practice in Toronto.

DR. GEO. T. ROSS, Montreal, has been elected Secretary of the Western Hospital, Montreal, succeeding Dr. F. J. Hackett.

DR. FERGUSON, of Ethel, has left on a trip to the Old Country. He will take a post-graduate course in London, Edinburgh, and probably Germany.

DR. W. J. MCGUIGAN, Vancouver, died recently, aged 55 years. Dr. McGuigan was Mayor of Vancouver when the Canadian Medical Association met there in 1904.

DR. B. E. TUGHEN, of Trowbridge, left last week for Grassy Lake, Alberta. We understand the Doctor has rented a drug store and purposes carrying on a drug business in connection with his practice.

DR. R. J. BLANCHARD, Winnipeg, President of the Canadian Medical Association, has been visiting the profession in Toronto, Ottawa, and Montreal, in the interests of the annual meeting at Winnipeg on the 23rd, 24th, and 25th of August.

DR. JOHN HUTCHISON, medical director of the Dr. Hutchison Sanitarium, 218 Simcoe Street, died at St. Michael's Hospital, Toronto, on the 1st of February. Deceased was 62 years of age, and formerly practised in Fordwich and St. Thomas, Ontario.

DR. GEORGE W. BADGEROW has been appointed surgeon to the Hospital for Diseases of the Throat, Golden Square, London, England. Dr. Badgerow is a Canadian well known in Toronto, where he graduated and practised his profession for some time before going to London.

Publishers' Department.

MR. W. J. HUBBART, whose advertisement appears in this issue, is a practical electrician, and is prepared to execute physicians' work with his best attention and despatch.

TREATMENT FOR INFLUENZA.—It is well known among medical men that rest, simple rest in bed, will cure a great many cases of influenza. Symptomatic treatment, however, gives the best results. The pain should be relieved by an anodyne. Quinine should be administered all through the attack, as it has a stimulating effect and antipyretic action, and seems to destroy the bacillus. When the pain is severe, two antikamnia tablets every two or three hours will give much relief. To relieve the cough when it is accompanied with a great deal of pain, one antikamnia and codeine tablet every two or three hours dissolved on the tongue, acts very promptly and successfully. That codeine had an especially beneficial effect in cases of cough, and that it was capable of controlling excessive coughing in various lung affections, was noted before its true physiological action was understood. Later it was clear that its power, as a calmative was due, as Bartholow says, to its special action on the pneumogastric nerve. Codeine stands apart from the rest of its group, in that it does not arrest secretion in the respiratory and intestinal tracts. In marked contrast is it in this respect to morphine. Morphine dries the mucous membrane of the respiratory tract to such a degree that the condition is often made worse by its use; while its effect on the intestinal tract is to produce constipation. There are none of these disagreeable effects attending the use of Antikamnia and Codeine Tablets.

CATAPLASM OF KAOLIN.—Probably no preparation of the Pharmacopœia has received as much attention from pharmacists as the cataplasm of kaolin. As yet there seems to be no one who has been able to so manipulate the official formula for it as to produce a satisfactory product. I have before me extracts from papers on it, written by six different men eminent in pharmacy, and no

For COUGHS and
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PINOCODEINE

“FROSST”

Each fluid drachm contains :—Codeine phosphate $\frac{1}{2}$ gr. combined
with Pinus Strobus, Prunus Virgiana, Sanguinaria
Canadensis, Populus Balsamifera and Chloroform.

As a routine expectorant, it is the same reliable product
that has had the support of the profession
for the past eight years.

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ASSISTS EXPECTORATION**

Perfectly safe with patients of any age.

For GRADUAL or
SUDDEN HEART FAILURE

Elixir Digitalin Co. “Frosst”

Each fluid drachm contains :—Digitalin 1-100 gr.
Nitroglycerine 1-100 gr. Strychnine 1-50 gr.

The original product that has created the demand for this
energetic stimulant.

CHARLES E. FROSST & CO.
MONTREAL, CANADA

two of them agree on a plan of procedure, and only one is of the opinion that the Pharmacopœia is right.—Abstracted from the Druggists' Circular.

It is a matter of small moment whether or not pharmacists can make this preparation, as it is at best but a poor imitation of Antiphlogistine, for which it is recommended as a substitute. Up to date no one has successfully imitated a \$20 gold piece, and the same may be said of Antiphlogistine. As long as the Denver Chemical Mfg. Company maintains the high standard it has set for its product there will be little necessity for the druggist to worry over methods of manufacturing Cataplasms of Kaolin.

GLYCO-THYMOLINE.—*Description*.—Glyco-Thymoline is a deep claret colored fluid with the taste and odor of thymol and eucalyptol.

Formula.—This preparation contains benzo-salicylate of soda, methyl salicylate from *Betula Lenta*, eucalyptol, thymol, pini pumilionis, glycerine and solvents. The alcoholic content is 4 per cent.

Action.—A solution composed of Glyco-Thymoline one part, water three parts, approximates the alkalinity and salinity of the human blood, thus harmonizing with the secretions of tissues treated. When applied slightly warmed to the mucous membranes of the nose and throat it is soothing, solvent, mildly antiseptic, exosmotic and anesthetic. It promotes aseptic conditions and favors the restoration of normal functions of the mucous membrane. Internally Glyco-Thymoline is antacid, carminative, and anti-fermentative.

Uses.—This preparation is recommended in the treatment of all catarrhal diseases of the mucous membrane, particularly of the upper respiratory, uterovaginal, and rectal tracts, as a solvent, soothing, antiseptic, and alkaline wash. Internally it has been successfully employed to overcome gastric hyperacidity, gastrointestinal fermentation, summer diarrhea of infants, etc. In obstetrical and gynecologic practice it has also proven useful. Its mild, non-irritating properties will suggest its use whenever and wherever an alkaline antiseptic solution is desired. In dentistry it has also been extensively employed.

Dosage.—Externally—Glyco-Thymoline may be used in solutions ranging from 10% to full strength. Internally—It may be used one-fourth to two teaspoonfuls in water as indicated.

Special Consideration.—The selection and quality of the ingredients, the methods employed in their combination, the formula itself, and the constant unvarying uniformity of the finished product.

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXII.

TORONTO, MARCH, 1909.

No. 3.

Original Articles.

A CLINICAL LECTURE ON STRICTURE OF THE URETHRA.

BY WALLACE SCOTT, B.A., M.B., F.R.C.S.

Delivered at St. Michael's Hospital, Toronto Feb. 11th, 1909.

This patient complains that he has a frequent desire to urinate, difficulty in getting the flow to start, that the stream is small, and with little force, and he says that these symptoms have existed for some time, and are becoming progressively worse. He also states that after the act of micturition is over there is some dribbling of urine. His history is as follows:—Sixteen years ago he had an attack of gonorrhœa, which you know is an acute urethritis, caused by the gonococcus or organism of Neisser. The urethritis gradually disappeared, leaving him in much the same trouble that he is in to-day. This state of affairs continued for five years, when the symptoms increased rapidly. He had more and more frequent desires to urinate, had a smaller and smaller stream, and finally he had a continuous desire and could pass no urine, or at most merely a few drops after great straining. He noticed that a small hard lump had appeared in his perineum, almost in the middle line and a short distance in front of the edge of the anus. Suddenly, while he was straining, he felt something give way in his perineum, and got relief, but immediately his perineum and scrotum began to swell and he had an intense burning pain in these parts. The swelling spread rapidly to the front of his abdomen and upper parts of his thighs. He was brought to the hospital and immediately operated upon. For some time he voided urine through his perineum, but after treat-

ment he recovered and left the hospital able to pass a good stream in the normal way.

After a short time the stream grew smaller, and the same conditions which existed previous to the attack of retention once more obtained. Four years ago he had a second attack of retention, but was relieved before any serious condition resulted. One year ago a lump again appeared in his perineum and he came under my care in the hospital. After some three weeks' treatment he left with a fair-sized stream, and now presents himself complaining as has been described. All these symptoms are those of urethral stricture, and he has had some of the complications.

When we examine him we see some long scars over the loins, some smaller ones in the groins, perineum and scrotum. The scars in the groins are of two kinds, one is irregular in outline, the other is linear. The former is where eleven years ago buboes broke: the latter where incisions were made five years ago.

What is the explanation of all these signs and symptoms? Sixteen years ago he had a urethritis, which was severe enough at one place to cause a destruction of the wall of the urethra. As the urethritis subsided healing began and, owing to the loss of tissue, a scar resulted, and the scar contracting, a narrowing of the lumen, called a stricture, occurred. The urethra being narrow a small stream is produced. The force of the expulsive muscles is expended on forcing the urine through the stricture, and the urethra being normal in size beyond the urine runs from the meatus with little force. Of course were the stricture at the end of the penis there would be considerable force to the stream. Since there is a narrow part the urethra will be distended on the bladder side of the stricture each time that urine is voided, and at the end of the act of micturition when the bladder ceases to contract the urine between the bladder and the stricture will gradually trickle through and run away, thereby causing the dribbling. The urethra on the proximal side of the stricture being in a state of dilatation becomes thinned. Now, in this abnormal state of the parts, it is not surprising that an inflammation set in. This spread to the tissues on the outside of the urethra and caused the little hard lump which he felt five years ago. This is called a urinary or periurethral abscess, and the swelling caused thereby so pressed on the narrowed urethra that retention resulted. Thus as the patient strained and strained in the endeavor to get relief the force of the contracting bladder and abdominal muscles was expended

on the thinned urethra, and suddenly it ruptured and allowed the urine to find an exit into the tissues. The escaped urine is in a compartment bounded on either side by the ischio-pubic rami, above by the triangular ligament, and in front by Colles' fascia. It can not pass in any of these directions, nor can it go backwards because the fascia of Colles is continuous with the base of the triangular ligament. The only way is to follow the under surface of the fascia of Colles into the scrotum and up over the anterior abdominal wall. This was what had occurred in this patient five years ago when he was admitted with a tense swelling in his perineum and a swelling of the scrotum, penis, anterior abdominal wall and upper part of thighs just below Poupart's ligament. At this time incisions were made into all these parts, and you see the resultant scars. After a tedious time the patient recovered and left the hospital able to pass a good-sized stream. The small stream, etc., soon returned, and he worried along without treatment until a year ago, when there was a sudden increase in them and a small lump came once more. After his experience he did not wait but came at once to the hospital, and I saw him. He had almost complete retention and there was a hard tender swelling in his perineum, nearly in the middle line and about two inches in front of the anus. I at once incised this lump and allowed a few drops of pus to escape along with a free flow of blood. This relieved the congestion and he could urinate much better. I treated his stricture, and after three weeks he could pass a full-sized stream. He received instructions to return in a week for further treatment, but did not do so, and has now presented himself as you see him.

In case a patient complains, as does this man, of frequent desire to urinate, difficulty in getting the flow started, a small stream and the dribbling, he has a stricture of the urethra. Not all patients with urethral stricture complain as does this individual. Most come with a gleet, which they wish cured. I am speaking altogether to-day of organic strictures, those which are due to the formation of scar tissue. The so-called spasmodic and congestive strictures differ from the organic or true stricture as follows: The spasmodic variety occurs in those cases where there is some irritation of the urethral mucous membrane and a spasm is caused by some excess in alcohol or by exposure to cold. The congestive stricture occurs as a complication of an acute urethritis when the mucous membrane swells enough to obstruct the stream. Of course a subject of an organic stricture may have either of these varieties added on.

An organic stricture may be either inflammatory or traumatic in origin, the former being in nearly all cases due to an attack of gonorrhœa, and the latter following an injury to the perineum as might be caused by a fall astride a fence, when the urethra is injured between the outside object and the symphysis pubis.

A stricture, whether inflammatory or traumatic in origin, results because the scar tissue in the healing part contracts. Most strictures are situated in the membranous or bulbous urethra, but inflammatory strictures may be further forward. Strictures do not occur in the prostatic portion, obstructions in this part being due to abnormalities of the prostate itself.

The reason that strictures occur at the neighborhood of the membranous urethra and bulb is because this is the portion which is most likely to be injured, and being anatomically the lowest part of the fixed urethra, any discharges are likely to accumulate at this point, and it will therefore be the most inflamed.

Organic strictures may be classified into (1) the common variety, which having been dilated, tends to contract slowly; (2) the resilient kind, which are very elastic, are easily dilated and rapidly contract; (3) the hard, dense strictures, which resist dilatation vigorously; (4) the irritable strictures, which are very tender, and the patient has urethral fever whenever they are interfered with.

A stricture may be annular, or it may appear in one wall only. In certain cases it is a thin membrane stretching across from one side to the other. This is the bridle stricture.

I used a term, "urethral fever," which requires some explanation. In certain patients a short time after an instrument has been used on the urethra there is a sudden rise of temperature and a rigor which is followed by sweating. This must be distinguished from catheter fever, which occurs in those who, using the catheter habitually, acquire a cystitis, and develop a condition of fever.

Let us take a case of suspected stricture. How is it best to proceed? The only way to discover that there is a stricture is to pass a bougie. What are the dangers and how may they best be prevented? He may have an irritable stricture and the examination cause urethral fever. The instrument may carry some organisms into the bladder and, infecting the urine, set up a cystitis. The point of the instrument may tear the urethra and cause a false passage. The manipulation may stir up some focus and set free some organisms which might cause an epididymitis by travelling up the vas.

To guard against these it is best to proceed as follows: Direct

the patient to take urotropin gr. v. four times a day, for three days, on the third day to take quinine sulphate gr. v. in the morning and at noon, and gr. x. in the evening an hour before the time set for the examination. He is also directed to take a purgative on the evening of the second day, and a hot bath just before the examination and to retire. Now at the time set he will have the urine in the best state to resist infection, he will be clean and warm and have a certain amount of quinine in his circulation, which will counteract, to a certain extent at least, the tendency to fever. The various instruments required are acorn-tipped bougies, gum-elastic bougies, metallic bougies, all of various sizes, and some filiform bougies. These bougies are such as are to be seen here ready for our examination. The acorn-tipped bougies are for diagnostic purposes, the others for treating the case. All the instruments have been sterilized. The patient is now placed on his back on the table, and the abdomen and thighs covered with sterilized towels. While I have been talking I have been preparing my hands as for a surgical operation. The penis is now exposed, and the glans washed with soap and water, the lips of the meatus opened and the exposed membrane wiped with some weak bichloride solution. I now fill this small glass syringe with some 2 per cent. cocaine solution and inserting the point into the meatus I slowly inject it. I now grasp the glans and compress the lips of the meatus and withdraw the syringe. The urethra is now distended with cocaine solution, and I keep it distended for a short time.

The smallest part of a normal urethra is the meatus. Anything which will enter it ought to pass freely into the bladder. If it does not there is a stricture, or other obstruction. Selecting now a No. 10 (English) acorn-tipped bougie, I lubricate it, not by sticking it into the sterile vaseline, not by sticking my finger into the vaseline and then rubbing it on the instrument, but by having some sterile vaseline on this sterile gauze and applying the ointment to the instrument without touching it with my hand except at the end which is not to enter. With my left hand I separate the lips of the meatus and enter the large end of the bougie. It passes freely until it is well down to the triangular ligament, when it is stopped abruptly. I feel around with the point, but it will go no further. Withdrawing it I repeat the maneuver with a No. 9. It also is stopped. Again I attempt with a No. 8. Again it stops. Once more with a No. 7. It also stops at first, but by manipulation it enters the stricture and passes on into the bladder. I now gently withdraw it until I feel the point engage in the stricture; noting with my right thumb

the position of the meatus with respect to the stem of the bougie, I gradually withdraw it until I feel that it is free from the stricture and again note the position of the meatus on the bougie. The two points are half an inch apart. I have therefore to deal with a stricture at the junction of the membranous and penile portions of the urethra, and I know that beyond that point there is no obstruction which will not admit a No. 7 sound. The importance of this latter observation lies in the fact that when a bougie is grasped by a stricture its point is no longer under the control of the operator, and if there be a second and smaller stricture the point may cause a false passage. A false passage on the bladder side of a stricture is a much more serious event than one on the distal side, because the urine will be forced into it in the former case, and may become extravasated, whereas in the latter case it is under no pressure, and is not likely to enter.

Selecting now this No. 7 steel bougie, and having lubricated it as in the former ones, I enter its end and it passes freely until the site of the stricture is reached. Here its progress is stayed, and I gently move the point from side to side and it enters and is passed on into the bladder. Note that in all these manipulations I stand on the patient's left and hold the bougie by the handle parallel with his centre line, and close to the abdomen at the start. As the instrument enters the point is kept in contact with the upper or anterior wall of the urethra, and my right hand slowly raised. No force at all is required nor permitted, the instrument, as it were, finding its way by its own weight. I repeat this manoeuvre with a No. 8. It also enters, but not so easily. Again No. 9 is introduced, and it is felt to be firmly grasped by the stricture. This will be enough at this time. The No. 9 will be left *in situ* for fifteen minutes, and in three days the process you have just witnessed will be repeated, beginning with No. 9 and ending with a No. 10. Then at three-day intervals it will be gradually dilated until a No. 14 can be passed with ease. He will then be allowed to go and advised to return for treatment in a week, then in two weeks, then in a month, then twice a year. The reason for this advice is that once there is a stricture there will always be a stricture, and a stricture being scar tissue will contract, and therefore a dilated stricture will get smaller. It is true that certain strictures when once dilated show little tendency to contract, but, as a matter of precaution, it is best to have a full-sized bougie passed at intervals during the rest of his life.

This method is called the method of gradual intermittent dilatation, and it is the best in suitable cases. Not all strictures yield to it, however. In cases of the highly elastic, resilient

strictures, which you remember are easily dilated and rapidly contract, it will be best to cut the stricture by an operation known as internal urethrotomy. Of this there are two kinds, one in which the stricture is cut from behind forwards, and is only applicable to those strictures which will allow the passage of a No. 8 sound, because the urethrotome is of this size and must be passed first, then the knife is extruded, and as the instrument is withdrawn the stricture is cut. The other consists in cutting from in front backwards. The bridle strictures are also best cut, as in these cases the urethra is not so much narrowed, but has the membrane crossing its lumen. I now want to say a little about another variety, the so-called impermeable stricture. There is no impermeable stricture in the literal sense. What is meant is one in which after repeated attempts not even the smallest filiform bougie can be passed. In such an event the only alternative is to do an external urethrotomy. Most of these strictures will allow the passage of a filiform bougie if the proper method is employed. This is as follows:—The patient, having been prepared as described, is placed on the table, then a filiform bougie is introduced until it stops, then another and another until ten or a dozen are in. Now each is taken in turn and moved up and down. As each sticks it is left there and another tried, and suddenly one enters the stricture and passes. As soon as this occurs one of two methods of procedure is open. The first is that of the gradual continuous dilatation. This consists in leaving the bougie *in situ* for a few days, when it will be found to lie free in the urethra. It is then removed and a larger size introduced, and the process repeated until a fair-sized one can be passed, then it is treated by the intermittent method. The other course open after the filiform bougie is passed requires the use of a bougie like this one. Note that it is shaped like the other steel bougies but that on the convexity of the curve there is a groove extending up to the handle and deep enough to allow the filiform bougie to lie in it. At the end of the curve the groove ends in a short tunnel. Now when the filiform bougie is *in situ* this steel bougie is threaded over it and gently introduced. The left hand holds the end of the filiform bougie and gradually the tunneled bougie passes down and enters the stricture. A small amount of force may now be used, and the steel sound ruptures the stricture. The after-treatment is by the intermittent method.

In using a metal instrument always keep the handle at right angles to the long axis of the patient, and be thus sure that the point of the instrument is pointing in the middle line. If difficulty be met with at the stricture, a manoeuvre known as the *tour*

de maître, and another as the *demi-tour de maître*, may be of assistance. The former consists in introducing the bougie with the handle at right angles to the patient's body. As soon as the obstruction is met, keeping the point well pressed against the obstruction, the handle is made to describe three-quarters of a circle towards the feet, then across the thighs, then up and across to the centre of the abdomen. The latter consists in introducing the bougie at right angles to the patient's body as before, and then making the handle describe one-quarter of a circle by passing upwards and across to the middle line, at the same time slightly raising the hand. In using bougies the utmost gentleness is necessary. One must never be in a hurry, nor neglect any precaution for cleanliness.

My remarks to-day have been about organic stricture, and I have demonstrated the method of examining the urethra. Let me impress on you that an organic stricture is scar tissue and can not be removed. This being the case, the patients so afflicted will always have a stricture. The most that can be done is to dilate them and keep them dilated. Hence the advice about the patient's coming back for treatment. If these patients live temperate lives they will have no difficulty, but if they are intemperate and neglect themselves, as does this man, they will suffer.

Attempts have been made to cure strictures by electrolysis, and certain good results have been reported. But inasmuch as the electrode is nothing more nor less than a bougie, perhaps the results come from dilatation. At all events, I have tried it and cannot confirm the good results. As I said, a stricture is scar tissue, and it is the nature of scar tissue to contract. I have not attempted to deal with all the phases of urethral stricture, nor with its complications. A few complications have been mentioned, and some methods of treatment received merely a word. I have described certain things in detail, and in a manner which I hope will be of service.

SOME COMPLICATIONS OF PULMONARY TUBERCULOSIS AND THEIR TREATMENT.*

BY J. K. M. GORDON, M.D., GRAVENHURST.

The object of this paper is to quote some interesting cases as seen in sanatorium work, but before saying anything about these cases in particular, let us offer a few remarks about complications in general.

In the sanatorium treatment of pulmonary tuberculosis the parts that call most often for special treatment as complications, are affections of the throat, the nose and the ear. We also note that wherever medical inspection of schools has been undertaken, the troubles that afflict the child most are exactly those which affect the adult afflicted with consumption.

Such being the case, would it therefore not be wisdom to correct at the threshold of life that which furnishes a suitable and favorable means for infection, and which, undoubtedly, in a percentage of cases at least, has been the means whereby the infection has gained an entrance into the body? When we consider this a little more in detail, it should offer no surprise. Obstruction to normal breathing may be the result of adenoids, so common in the majority of children. It may be by so-called catarrhs of the nasal linings, producing hypertrophic conditions, accompanied, as it so often is, by the purulent and mucopurulent discharges, which by aborted inspiration or expiration may be forced into the ever-ready opening of the eustachian tube near by, thus carrying infection to the neighboring organ, the ear. Also by a continuation of the chronic process over the lining of the pharynx to the larynx, and if it is not an actual means of carrying infection further, it at least offers a very weak barrier to the onset of infection by the act of respiration. Now if the nasal passages are obstructed, we know that for the act of inspiration, which is compulsory and necessary on the part of nature, if she cannot accomplish it in the normal way, she will bring to her aid the abnormal use of other parts, or in other words, the act of breathing is accomplished by the use of the mouth. By so doing the inspired air passes directly to the lungs unfiltered, unwarmed, and impinging on any obstruction that may be in the way, thus carrying the germs of putrefaction, the result of particles of food left in this much-neglected part of our economy—the mouth. It also

* Read at Canadian Medical Association, Ottawa, June, 1908.

dries natural secretions by evaporation and irritation, thus rendering these parts amenable, by reducing nature's power of resistance. When we consider how commonly these parts are affected in childhood, together with the general reduction of strength, how prone it leaves all these linings to the inroads of infection; the wonder is that we do not have more trouble, when we stop for a moment to consider how very prevalent is this disease.

Again, along part of this tract passes what to the child constitutes for the first few months in its life, at least, its almost only means of subsistence—milk—and should this all-important food not be beyond suspicion, it contaminates not only the digestive tract, but also the inspired air, thus forming a too ready means of infection to this extremely non-resistive time of life. Thus we may ask the question: Is it any wonder that so many die in infancy and early childhood of this dread yet controllable disease—tuberculosis.

Now, seeing that we may prevent many complications of adult life by correcting the same in childhood, how urgent, therefore, is it to each and all, more especially to members of the medical profession, to put forth every strenuous effort toward the prevention of this dread trouble along the lines outlined above, by protecting our little ones by seeing that they get what will be no source of contamination in the food they take, and in the air they breathe.

The ordinary modes of infection are by the skin, the respiratory tract, and by the digestive tract. But as infection through the skin is comparatively rare, it means that the greater sources of trouble are through the two latter tracts, thus showing how necessary it is to keep those parts in such condition as to offer as strong a barrier as possible to the onset, and also that our food and air shall be of the purest that can be procured.

Should this enemy get past the portals, as it often does, partly as a result of neglect, partly as a result of ignorance, then nature throws a screen of divinely devised glands, to check the further onset. But should infection accumulate here, and nature's powers of resistance at the same time wane, then there is nothing to prevent the precipitation of this infection into the surrounding tissue and approximal organs, thus giving us complications of any tissue or organ in the body, as none are free from the inroads of this insistent and inveterate trouble.

May it not also be that in our earnest efforts of present sanitarium methods to accomplish the return to health and strength we in some measure may defeat, or at least retard, the end we have in view, by urging our patients to make use of the

greatest amount of food possible instead of studying the individual tendencies together with a review of past history and habits, and by so doing outline a diet list that will accomplish the greatest possible good in each individual case.

Thus we see that so-called complications may be the cause of tuberculosis, and we also see that some complications may be the result of the same, and again there are some cases that cannot be classified as either cause or result, yet remain as outstanding and undoubted complications. Among those causing the trouble we might mention neglected conditions of the nose, throat and ear. These form the great bulk of all complications. In many instances they become complications of result by offering little or no resistance to the passing infection. But we leave these to the domain of the specialist, and mention a few others which have come under our notice, and these presented unusual interest to us on account of their rarity.

Case 1.—T. H., male, aged 56. Addison's Disease. Family history, good. Previous history, health all that could be wished for up to eighteen years of age, when from injury to the foot there developed a condition of irritation which eventually attacked the proximal extremity of the inner metatarsal bone. This was opened and the diseased part removed. Operations of like nature were repeated during a period of sixteen months, making eleven operations in all, and resulting in the loss of the two inner metatarsal bones, and also the phalanges of the great and second toes. This left a permanent good result, leaving only a slight lameness. Health then remained good till about three years ago, when the persistence of a chronic cough and reduction of general health led him to have the same investigated, and on examination of the sputum the tubercle bacilli were found. He then went to Muskoka, staying a few months at a time. At the end of these several periods he was able to resume work.

Present Attack—This went on till about a year ago, when he suffered from what appeared to be a violent and severe attack of indigestion. A gradual discoloration of skin was noticeable, but living so much in the open air nothing serious was thought of this till after this attack, when it increased rapidly, and never fully went away. It was of that peculiar bronze, and affected the mucous membranes also. The patient again decided to spend the summer in Muskoka, living in a summer cottage with his family. On examination we found a chronic fibroid phthisis with more or less scar tissue over upper and middle lobes on right side, and to a less extent on left with no decided cavity

formation, with moderate amount of sputum, which proved positive, yet up to this time there was no temperature. Other organs were normal as to position and as to work accomplished. He began to feel that weariness, especially on exertion, with an irregular heart and attack of pain over epigastrium, followed at times by vomiting, and again by diarrhea. Under combination of acid with digestives and dieting he would get relief for days, but indiscretion in diet would bring back an attack, and these now occurred at greater frequency, and were more aggravated, and the color of skin assumed a deeper hue. It was now beginning to affect rapidly his strength, so much so that it was with difficulty we had him transferred to the hospital. On watching the symptoms closely for a few days we decided that we had a case of unusual severity to deal with, being convinced of our diagnosis, and as a result we had the patient removed to his home near Toronto, where at once treatment by organotherapy was begun by using the fresh suprarenals. But in spite of all his strength rapidly waned till the end, which occurred in less than three weeks.

As nearly all cases of Addison's Disease are the result of tuberculosis of the adrenals or of ganglia near-by, or of both, yet being among the more uncommon complications we thought it would be of interest to go over this case in detail. In doing so we cannot but note that, although an infection of tubercle bacilli may be in different parts of the body, and that for a lengthened time, yet we see how vitally it tells when it attacks such organs as we have noted above. Can it be that there is a certain degree of immunity in organs that are usually attacked? Is their resisting power increased? And in like manner do the less accessible organs respond more readily to the inroads of the disease, or is the increase of virulence due to increase of infection alone?

Case 2.—Hysteria; A. C., female, aged 40. Family history, good. Previous history, uneventful. Present condition—On examination this was found to be an incipient case, with an inactive lesion at the apex of the left lung, extending to the second rib anteriorly, aggravated by ozena and granular pharyngitis, a perforated drum and disorganized middle ear, all of which responded to appropriate treatment. Her general strength was much below par, and with hemoglobin of 55 per cent. For a few weeks she responded nicely to life and treatment, but during all this time there was perceptible an unusual craving for unnecessary sympathy, in effecting which she had resort to questionable and suspicious symptoms. These were met with great

forbearance and patience by an unusually sympathetic head nurse; but suddenly aggravated digestive symptoms began to appear, accompanied by expressed bitterness towards all attendants and refusal to speak, and in spite of the mildest kind of diet, she would vomit everything. Fearing a primary gastric malignancy, a test breakfast was given, which she fortunately retained long enough to be of use for examination purposes, and which was removed by the stomach tube, to which she objected not a little. Finding nothing to substantiate our fears, we then decided to feed by tube, after washing the stomach regularly. This she stoically submitted to for some days, when she decided to resume the ordinary diet in the usual manner. She at once resumed the usual order without any untoward exhibition of disposition whatever, and regained her usual weight and strength, leaving the hospital after a five-month term, to resume her former avocation of house-work, which she has followed ever since. She gave no particular trouble afterward, and left us with expressions of gratitude to all about her—an apparent cure in more ways than one.

Case 3.—Tuberculous Diarrhea. R. F., aged 24; male. A moderately advanced case with lesion over apex of each lung; no decided cavity formation, yet lesion extending to lower border of scapula on posterior aspect of right lung, and semi-moist condition. This case had been under sanatorium treatment for a few months before he came under our care, and responded satisfactorily as to the limiting and healing of the pulmonary lesions. Was able to take moderate exercise during the greater part of the summer, but during the intense sultry weather of August he contracted an epidemic diarrhea, which affected all that were boarding at the same house. By removal of products of irritation by an occasional dose of castor oil, and following up in the interval with bismuth and sedative combinations, as he suffered considerable pain, he gradually improved, and at the end of two weeks was once again his usual self. With careful dieting and the change to stomachic alkaline, he continued to progress in every way for some weeks, in the meantime being admitted to a hospital, showing no signs of activity in any way. Shortly after, as a result of the excitement of a shooting match in which he took part, diarrhea followed within an hour, accompanied by a rise of temperature. This responded to former treatment to a limited degree only, and, in spite of dieting and change of treatment, continued for three months, and even yet cannot be trusted with the least indiscretion. On examination the tenderness could be traced from the ileocecal valve toward the umbili-

ens, with increased tenderness in places, and a more limited tenderness over the cecum and ascending colon. The bowel contents did not show the tubercle bacilli, though had such examination been repeated I do not doubt it could have been eliminated.

But what I wish to particularly mention here is the result of treatment, and also the fact that one case is never an absolute rule for another. With the dieting still watched, we changed the bismuth antiseptic mixture to a coto mixture recommended especially in such cases by Burney Yeo, but it was unavailing. We then tried lactic acid mixture, which is very effectual in obstinate cases, but only for a limited time did this have any effect. But what gave the desired result was the administration of ten grains of ichthyol in capsules twice a day, with an alkaline bismuth stomachic at mealtime, giving capsules two hours after meals. The effect here was very satisfactory—tenderness decreased, and motions assumed normal appearance. By discontinuing for lengthened intervals he has once again been able to resume moderate exercise, with careful dieting under limitation of amount, occasionally aided by a digestive.

Case No. 4. Although not directly a complication, yet this is a complicated mechanical condition produced by the progress of the trouble otherwise.

Male, aged 19. Eighteen months ago came to Muskoka with an active pulmonary tuberculosis, including the upper and middle lobes on right, with definite signs of softening over the upper left part, also similar active conditions over upper but not so advanced, and around each side thickening, due to a pleurisy at no distant date. Patient under rest and care made satisfactory improvement, moisture gradually drying, but definite cavity formation was left over upper right, with scar extending from fourth and sixth ribs in front to a point opposite scapula behind.

As the cavity formation increased, which it did slowly, and as the surrounding adhesions became firmer, it began to affect the circulation in general. Heart began to be displaced upward and to the right, and extremities began to show a gradual venous congestion, which, on examination, was found to be due to obstruction. On looking for this obstruction in the heart we even to the last found it negative. About six months ago the patient entered the hospital, and on examination the lesion was found as above. On watching the case for some days, and noting the increased venous congestion, we decided to put the patient at rest in bed to note the effect. This relieved the breathing only. All this time the patient was without or showed only a degree of temperature. After two weeks in bed the tissues began to show

that the veins were still more prominent and circulation therein more sluggish, and now swelling began to be noticed, more especially, in fact altogether, in lower extremities. The peculiar thing about these swellings was the irregularity and the way it affected some parts only, such as from knee to ankle on one side, and from hip to knee on the opposite side, or again from the knee down on one side, or vice versa, it not being at all regular. For the few minutes that patient would rise for nature's demands the circumference of legs would be affected to as much as half an inch in from ten to fifteen minutes; sometimes less, but a definite increase in a few minutes in upright position always was noticeable. As the weeks went on it began to show as an accumulation of fluid in abdominal cavity, then in the arms, then over the scalp, and in the tissues of the face. The pleural cavity also began to show accumulation. The heart now began to feel the effect of the pressure, as also the act of respiration. The accumulation in abdominal cavity relieved itself by periodical attacks of diarrhea. We tried to reduce the accumulation by diuretics, among which I might mention nephritin, which greatly increased the fluids excreted by the kidney, only to produce an extreme thirst in return. All this time the kidneys showed no trace of trouble, but towards the last, as the pressure became greater, they began to show tenderness and pain from congestion, and a trace also of albumen. The pressure in the abdominal cavity now began to affect the digestive tract to the extent that some days no solid food could be tolerated. This unsettled state was relieved only as the pressure at times lessened. For weeks we did not permit the patient any exertion. He suffered comparatively little pain till pressure began to interfere with natural functions, and that not till about a month before the end. This was a case of life being drowned by an abnormal accumulation of patient's own serum.

This case was specially interesting to us on account of being seen by no less than a dozen of Toronto's leading physicians. We noted the diversity of opinion given, as without any heart lesion it seemed to most of them hard to explain. Following the case from day to day, we became quite convinced that it was almost wholly due to a mechanical result of adhesions affecting the first of the lower vena cava, then the auricle, and latterly the upper vena cava, and all three as the cavity extended to these parts—in fact drew these parts over that way; and when the patient arose it caused a further obstruction by a slight kinking of the lower vena cava or a further constriction by certain adhesions of one or other of all these parts. It may be a very com-

monplace explanation, but it answered to all the resulting symptoms. I do not think that tuberculosis in other organs would have any material effect. At least would it effect so gradually what could be effected by the mechanical interference at that vital situation, as indicated?

Case No. 5.—H. V., aged 26; single. Family history, mother died of tubercle bacilli. Previous history, worked as a file-maker in rather dusty surroundings. Present attack, gradual onset from cold. On examination was found to be an advanced case with cavity formation in both lungs, and condition active. Patient at first was kept at rest for some weeks, with slight improvement. When able to be out for some days, at rest she suddenly developed a pain in leg, increasing in intensity and accompanied by swelling, which on examination we found to be due to thrombosis and accompanying phlebitis. With rest, swathing limb in cotton, and applications of belladonna liniment, she made a good recovery therefrom. This condition we found in several cases, but always in advanced disease in lungs in phlegmatic make-ups, with sluggish circulation.

Case No. 6.—J. M., aged 47; male. Empyema. Family history uneventful. Previous history, patient is a farmer, who had worked hard; about eighteen months ago from exposure he developed the left side pleurisy with accumulation, which was not removed at the time. With this degree of recovery he went about his usual work with a certain amount of exertion for some months. At the end of that time he sought further relief, and on examination his physician found an accumulation of fluid, extending as far as the third rib; this he relieved by incision, and for the first time found the fluid to contain pus. Drainage was inserted and kept up for some time. Every time the drainage was discontinued there was re-accumulation and rise of temperature. A counter-incision with double drainage relieved the situation for a time, but with no particular lessening of symptoms, although the patient gained in weight and improved in general health. So a radical operation was strongly advised. Acting on this advice, parts of three ribs were removed and the cavity thoroughly cleansed and drained, and from that time on patient made a gradual recovery, and general health slowly returned to normal; he is still enjoying good health up to the present time. The pleasing feature in this case was that a case, although tubercular, made such a happy return to health in spite of this extreme and adverse complication.

While time will not permit us to go into details in some other

interesting cases, yet we might mention a few that are worthy of notice—one of cerebro-spinal meningitis, which resisted all forms of treatment and eventually proved fatal; another of tubercular cystitis, which was kept relieved and in comparative comfort by medicines that had an antiseptic effect on the urinary tract. But the general health gradually failed within a few months after leaving the institution.

In conclusion, let me say that although much has been written about this trouble, and much more will be written in the immediate future (for the public has become aroused, and in a more righteous cause there can be none greater), it remains with the profession to direct this activity along lines that will accomplish the desired result, which means the eradication, or at least the control of what has been for so long a time a scourge to humanity; and seeing that the world is looking to this generation to accomplish this, let every effort be put forth, by education, by prevention, and by protection; and even though it should take a generation, what a wonderful boon it would be to lessening and preventing the suffering and unhappiness of generations to come.

Clinical Department.

Four Cases of Rumination in Man. By E. M. BROCKBANK, M.D., F.R.C.P., in the *Medical Chronicle*.

Since publishing a paper on Merycism or Rumination in Man (*British Medical Journal*, February 23rd, 1907), I have received several letters from subjects of the phenomenon who have described their own ruminating experiences. Some of these cases are here recorded in the words of the writers, three of whom—A.B., C.D., and E.F.—are medical men. As the condition is not at all common, and is still by no means understood, I have thought it worth while to publish the notes, which are specially interesting from the fact of their being personal experiences.

A. B. I am, in some measure, a ruminant, and from time to time include rumination amongst my digestive processes. It has always seemed to me that as to whether I ruminate or not depends for the most part on the kind of food taken, but I have sometimes thought the condition (nervous?) of the stomach a possible determining factor in the matter. I am certain that with regard to the capability of rumination my stomach is, at times, capable of exercising selectivity. I have noticed—I think properly in the same connection—that my stomach will sort out orange pips accidentally swallowed and return them, often without *any* other of its contents being included, and this shortly after a full meal when there must have been much besides still in process of gastric digestion. The process is, on the whole, a pleasurable one, and has nothing akin to vomiting, I mean no suggestion of nausea or discomfort. I think the return is aided by contraction of the diaphragm. I rather think I have lost *some* of the capability of late years. I am sure that naturally the tendency with me is to re-chew and re-swallow. I mean I am certain I have no instinctive desire to spit out the material so returned to the mouth. I wish I had been more plentifully endowed in this particular. I certainly envy our friend the cow.

When I quoted the rejection of orange pips I had in my mind rather the (?) allied function seen in carnivorous birds. For I presume the method adopted by the stomach of the owl, for instance, in dealing with fur and feathers, may be placed somewhere in that gallery. But apart altogether from this, I am still what I may call a "faculative ruminant." Anyone who

will champion the (oftener overlooked) capabilities, intelligences and virtues of "tissue units and aggregations" is, in my poor opinion, doing well in these days, of conceited and blind disregard advanced by quasi-intellectual advocates of the artificial. I have noticed, I think, too that the stomach will upon occasion send back matter other than solid, namely, Benedictine as if (?) for dilution in the stomach.

C. D. I am 38 years of age. Family history, *nil*. My father and brothers do not know of any case in the family. Mother died 1887 (ovarian tumor); it would have been known had she ruminated. No neuroses in family.

Personal history. Always healthy. In youth subject to migraine. Last and worst attack at 21 years. Very easily caused to vomit. Very subject to sea-sickness. No history of exanthemata except measles at 14. Influenza in 1891. Since living here, exactly seven years, have not missed a day's work through indisposition. Cycle a great deal, circ. 7,000 miles a year. Weight constant for last sixteen years, 140 lbs. Height, 68 1-2 inches.

History of Merycism. Began five years ago. Small quantities of food would be regurgitated after a very full meal; soon mouthfuls. At first these were ejected, later rumination began, and being found both pleasant and beneficial, has been kept up until now. Rumination occurs after most meals, more after hearty eating or if much fluid is taken, but as it is then (in the latter case) less pleasant I do not drink at dinner (1.30 p.m.). Regurgitation takes place most freely on the bicycle. This I am inclined to attribute to the fact that I hold my abdominal muscles very tense when riding, so causing pressure on the abdominal viscera. Sometimes the stomach contents gush up without conscious effort, sometimes there is a definite movement, as described in your article, to relax the cardiac orifice. This is of course preceded by the sense of fulness when the stomach is squeezing its contents. There is very little "selection"; sometimes food swallowed last is regurgitated first, but not always in keeping with Beaumont's observations on the gastric movements. There is no selection of "fats" or bacon at all, but I very often find the fibrous portions of meat returned for rejection, whilst if I have eaten heartily of anything which causes trouble I have no difficulty in vomiting nearly all. As far as I know I am in perfect health, and have no reason to regret being a merycist. I regard it as a "favorable variation." Though not a large eater, I never study my food, but "eat what is set before me."

I knew nothing of the occurrence of rumination in others until I saw your article, in which of course I was at once deeply interested. I confess to some little amusement at your suggestion for treatment. Of course some very self-conscious people might like treatment for anything in which they differed from others, but for myself I consider the advantage of rumination too great to wish to return to the normal. The ruminant has no need to join the chewing-cult with its 32 or 40 bites per morsel; he can swallow his meal with due enjoyment and settle accounts afterwards. Yesterday I spent in the Assize Court, rushing out for half an hour for lunch. Rumination went on quietly at intervals during the afternoon, thus amply compensating for the too hurried swallowing of liver and bacon with vegetables. There is just one disquieting thought which comes to my mind. Is this hyperactivity (opening and closing of the cardiac orifice) at all likely to go on to chronic irritation and cancer? Time alone can tell in my own case. I would like to know if there is any record of carcinoma of stomach in a merycist.

E. F. I have been a ruminant for, as far as I can tell, all my life; at any rate, I remember at the age of 16 I made some original observations upon the habit which was at that time quite a confirmed one with me. At that time the idea occurred to me that perhaps it was the stomach's protest against too much food, and I decided to let it (the stomach) have its own way as an experiment; I therefore ate little and spat out all that came up; the result was that in about ten days I became so weak that I fainted for the first and only time in my life; the eructations had been going on all the time. My age is 41.

The action is partly involuntary and partly voluntary; the stomach can be felt to begin the ejection by a contraction, and this causes a feeling of desire to assist nature by a slight inspiratory movement as in hiccupping. The process is the reverse of unpleasant, and can with a little care be carried on so unobtrusively as to be unnoticed by anyone else. It occurs about five minutes after a meal, but is not invariable; some meals are not followed by it; it lasts half an hour. Certain kinds of food induce it, especially biscuits and cheese, which return in a pasty bolus, but the commonest cause is hasty eating and imperfect mastication, and it is to this rumination that I attribute my immunity from the ill-effects of swallowing meals very hastily on certain occasions (I frequently chew much of my meal while going a journey in my buggy).

The taste of the food is pleasant and the selection power of

the stomach is undoubted—only badly chewed morsels are sent up. As a rule I have regular daily evacuations, and am sure I have no tapeworm. I suffer at other times from extremely acid eructations, but these are entirely different; it would be intolerable to re-chew and swallow the food at these times.

[The reference to a tape-worm is made because I published a case in which a Continental medical man, who had ruminated regularly for many years, was entirely relieved of the condition after he had passed a tape-worm.]

G. H. I never eat gristle or the stringy part of bacon, because it is invariably returned without the slightest effort and apparently untouched by the gastric juice. Uncooked apples or raw turnips (noticed when a boy) are extremely difficult for my stomach to tackle, and unless chewed very fine invariably come up. Milk never returns, nor tea, but coffee and milk does, and also wine, such as claret and port; and I seem to taste it better if it does; but champagne doesn't. If I take hot buttered toast or soda scones with afternoon tea the whole thing turns sour and comes up wholesale, so that I have learned to avoid it. The skin parts of Finnan haddocks also return, but generally altered in taste by the gastric juice.

The regurgitation also occurs with my sister, but with no other member of my family.

A Case of Lead Poisoning. By H. W. WRIGHT, M.D., Resident Physician, New York State Hospital for Crippled Children, West Haverstraw, N.Y., in *Archives of Pediatrics*.

The following case which was seen with Dr. Matthew Sullivan, of Haverstraw, seems worthy of report because of the rather acute onset with convulsions, the mode of invasion of the poison and the extensive paralysis.

A girl of eight years, never previously ill except for mild attack of "malaria." Nutrition usually below par.

About two weeks before any symptoms of present illness began, the interior of the house in which the patient lives, was painted and papered. The water supply is above reproach and no other members of the family, which consists of five other healthy children, have been affected. On July 17, 1908, she had an attack of vomiting, with slight fever and prostration. The next day she sat up and was about the house presenting only a condition of moderate malaise until July 25th, when during the

night she had a series of convulsions, which involved the entire muscular system. Unconsciousness followed the convulsions, but was very transitory. After the subsidence of the convulsive seizure, there was no paralysis observed until a week had elapsed. In the interim the patient complained of pains in her limbs, had a poor appetite and became constipated. She continued to be up and around the house, and about August 2nd, paralysis was first observed in the right forefinger, which she was unable to extend; soon "wrist-drop" followed, then the same condition occurred in the left hand. The pain in feet became more intense and "drop-foot" gradually occurred. For the past two months intestinal colic has been occasional.

Physical Examination (November 10, 1908).—Mucous membranes pale; tongue pale and clean; eyes puffy beneath the lids. Along the margin of the teeth of the lower jaw there is pronounced black line; this is not evident in the upper jaw.

Extremities.—There is "drop-wrist" and "drop-foot" on both sides, the patient walking only with assistance. The flexors and extensors of the wrists and fingers are powerless, also the supinator longus and biceps of each arm. The triceps, deltoid and scapular muscles have escaped.

The extensors of the ankle and toes are entirely paralyzed, the flexors partially so, as are also the muscles which invert and evert the feet.

Sensation is preserved throughout. Trophic disturbances are evident in excessive perspiration, coldness and slight edema of the extremities.

The achilles reflexes are absent, but the knee jerks are present.

The urine shows a trace of albumin. The heart is over-active and the arterial tension appears high in the radial pulse.

Because of the suddenness of the onset with convulsions and the rather quickly developing paralysis a condition of anterior poliomyelitis was first thought of; but as shown above, the paralysis is perfectly symmetrical and other symptoms strongly suggesting saturnism have appeared.

Therapeutics.

Heart Stimulants.

Horatio C. Wood, jr., in the November number of the *American Journal of the Medical Sciences*, considers the action of the heart stimulants, asserting that there are three essential factors in the action of these drugs which interest clinicians. (1) The stimulant influence upon the cardio-inhibitory mechanism which prolongs the diastole, and thus slows the pulse; (2) The increase in the tonicity of the heart muscle leading to a more complete and more powerful systole; and (3) The constriction of the blood-vessels. The action of digitalis in slowing the pulse is, he believes, a much more important factor in its beneficial influence in heart disease than is generally deemed. In cases of chronic heart disease, when it is essential to make the burden thrown upon the feeble heart as light as possible, it appears to him highly important that we do what we can to slow the pulse, and the inhibitory stimulation of digitalis becomes the beneficial factor in its effects. The mere stimulation of the heart muscle is a matter of minor importance. As to the vasoconstricting action of digitalis, this has frequently been regarded as a harmful by-effect to be avoided or combatted, a point of view which he believes has at times led practitioners to adopt irrational or even injurious measures; and while it is true that it requires more force to drive the blood through narrow arteries than through dilated ones, it is equally true that in many cases the vascular contraction is a conservative effort on the part of nature to maintain the circulatory equilibrium. Clinicians should not be too hasty in their efforts to dilate the vessels in cases of chronic heart disease; especially so since almost the only agents which we possess for this purpose, the nitrites, are substances which increase the rate of the pulse and so counteract the beneficial influence of digitalis in slowing the heart. The only reason more harm has not been accomplished by the use of nitroglycerin in heart disease is because the method in which it is given precludes any possibility of its having any serious influence upon the circulation.

The effects of a single dose of nitroglycerin last on an average about three quarters of an hour or perhaps an hour, and how great is the folly then of giving it three times in the 24 hours, and expecting any permanent result. There is a widespread belief that strophanthus differs essentially from digitalis in that it exercises

little or no influence upon the blood vessels, a belief for which he has sought in vain for any convincing scientific evidence. Recent investigations indicate that the action of strophanthus upon the vessels is a very marked one, and even if it be less powerful an influence than that of digitalis, the difference is comparatively slight; one important distinction however between the action of the drugs is that strophanthus is less likely to give rise to cumulative toxic symptoms than is digitalis, a fact of general clinical experience which has been experimentally confirmed by Fraenkel. Of adonidin our knowledge is far from satisfactory, but its effects on the heart muscle and cardiac inhibition are similar in kind, if somewhat less in degree than those of digitalis. On the other hand Kakowski found that while strophanthus and digitalis both constricted the coronary arteries, adonidin widened them. In cases of chronic heart disease or weakness, when merely the cardiac action of this group is desired, digitalis yet stands supreme. As to its active principles, digitoxin at present holds the foreground, but this much is clear, that if there be any single principle which represents completely the therapeutic virtues of digitalis that principle is not digitoxin. Kakowski found that neither digitalin, digitalein, nor digitoxin produced the increase in the contracting power of the heart that is brought about by digitalis.—*Cleveland Medical Journal*.

Physician's Library.

Gynecological Diagnosis. By DR. GEORGE WINTER, Königsberg, and DR. CARL REGE, Berlin. Edited by DR. JOHN J. CLARK, University of Pennsylvania, after the third revised German edition. Price, \$6.00. Philadelphia and Montreal (Lindsay Building): J. B. Lippincott Company. 1909.

The production of this valuable German book in English is a matter for congratulation to the editor and translator. Unlike many of such translations, it would be difficult to distinguish it from an original production in English. Its subject matter is so well connected and the composition is of such an order that its perusal is a profitable pleasure.

As it is purely a work on diagnosis, it is fairly exhaustive. The writers have accounted for practically all of the various means at our disposal for making diagnoses and have carefully shown their respective values. One outstanding feature is the thoroughness aimed at, not only in making the diagnosis, but in recognizing all the actual conditions present that would influence treatment and the progress of the case. The introduction of the microscopical aids to diagnosis in the various sections increases the value of the book to a very considerable degree.

For the general practitioner to follow its teachings a vast amount of care and study would have to be exercised, but undoubtedly the patients would be benefited thereby. For the surgeon, whose special field is gynecology, it contains much of value. The book is not fussy, but is well filled with good, old and new, reliable information, that should benefit any of its readers. On the whole, the illustrations are effective, but improvement might easily be made in some of the diagrammatic drawings. The cystoscopic views will serve to familiarize many with the actual bladder conditions, who may not have the opportunity of studying them in a practical way. It might be well to remind the publishers that this book does not strike one as being large, but for its size, its weight of five pounds five ounces seems unnecessarily uncomfortable. The quality of the illustrations does not strike one as demanding such heavy paper, and one cannot but feel that the reduction of the weight of the book would add much comfort to the pleasure of reading it.

F. W. M.

Diseases of the Digestive Canal (Oesophagus, Stomach and Intestines). By DOCTOR PAUL COHNHEIM, Berlin. From the second German Edition, edited and translated by Dudley Fulton, M.D., lecturer in medicine, University of Southern California, Los Angeles. Illustrated. Price, \$4.00. J. B. Lippincott, Philadelphia, London and Montreal (Lindsay Building).

A perusal of this work leaves no doubt that it was the intention of the author to write a practical work for general practitioners. With this object in view he gives prominence to the consideration and interpretation of complaint and subjective symptoms of patient. The author believes that in the diagnosis of gastro-intestinal diseases one has, in most cases, to do so without laboratory methods. The subject-matter is concise. Each disease is treated in a direct manner, very little attention being given to the views of others or to literature on the subject. Little space is given to physiological, pathological and anatomical matters. Although the treatise is a practical one the author has not neglected the modern methods of diagnosis. The subject of test-meals, analysis of gastric contents, and determination of functional activities of stomach, are all considered. G. C.

Diseases of the Nose, Throat and Ear. PACKARD. Lippincott's New Medical Series, 1909. Price, \$3.50. J. B. Lippincott, Philadelphia, London and Montreal (Lindsay Building).

In writing this book "an endeavor has been made to present the essential of diseases of the nose, throat and ear, and in a form suitable to the needs of students and general practitioners." The author has succeeded in producing a book concise, up-to-date, fairly practical, and withal well written and well illustrated. There is a chapter on "Diseases of the eye resulting from pathological conditions in the nose and the accessory sinuses." The teaching, as a rule, is sound. The author believes in the enucleation, not trimming, of diseased tonsils, advocates in certain cases the alveolar route for maxillary antrum suppuration, and in the radical operation for the latter advises thorough removal of the mucous membrane, and apparently makes no nasal opening. In epistaxis he doesn't mention the best treatment, when practicable, viz., touching the bleeding vessel with a dull red cautery point. Diphtheria is not described, the only reference to it being under the diagnosis of follicular tonsillitis. Intubation is not mentioned, much less described, and the same with tracheotomy. But in spite of these faults the book will serve as a useful guide or introduction to the study of this specialty. G. B.

Human Anatomy, Including Structure and Development and Practical Considerations. By THOMAS DWIGHT, M.D., LL.D., Parkman Professor of Anatomy in Harvard University; J. Plairfair McMurrich, Ph.D., Professor of Anatomy in the University of Toronto; Carl A. Hamann, M.D., Professor of Anatomy in Western Reserve University; George A. Piersol, M.D., Sc.D., Professor of Anatomy in the University of Pennsylvania; and J. William White, M.D., Ph.D., LL.D., John Rhea Barton Professor of Surgery in the University of Pennsylvania; with 1734 illustrations, of which 1522 are original and largely from dissections by John C. Heisler, M.D., Professor of Anatomy in the Medico-Chirurgical College. Edited by George A. Piersol. Published by J. B. Lippincott Company, Philadelphia and Montreal.

The text book on Human Anatomy, edited by George A. Piersol, is a magnificent volume of 2088 pages well printed in clear type and abundantly illustrated, many of the illustrations being colored. There are amongst these illustrations some diagrams which are very clear, but the vast majority depict actual preparations and dissections, which were made specially for this work. The descriptive text is clear and concise and yet comprehensive enough for all who may wish to gain a thorough knowledge of the anatomy of the human body, including the embryology, structure, relations and gross appearances of the various parts.

Throughout the volume there are articles on practical considerations which should appeal to all in active practice, being devoted to anatomy as applied in actual practice. These practical applications of anatomy have been written by Dr. J. William White, Professor of Surgery in the University of Pennsylvania, and are certainly the most clear and helpful.

The nomenclature used retains most of the terms in use among English-speaking anatomists and surgeons, but the terms adopted by the Basle Congress appear in special type.

The volume begins with an introduction which deals with the relations between anatomy and biology, the sub-divisions of the anatomical body, the general plan of vertebrate construction and a consideration of descriptive terms. This is followed by nine pages devoted to the elements of structure.

The next part deals with the early development of the human body, and this is followed by one concerning the elementary tissues.

The skeleton, including the joints, has over 400 pages devoted to it, and the practical considerations occurring at frequent intervals are especially instructive, including as they do the fractures and dislocations and errors in development.

In the chapters devoted to the muscles the descriptions are exceedingly good and concise. Here, also, there are many practical considerations dealing with dislocations and surface markings.

The vascular system is then described, and following this the nervous system and organs of special sense, the skin, nose, eye and ear. The tongue and taste sense is described in the following section, which is devoted to the gastro-pulmonary system.

The last portion of the book deals with the urino-genital system.

This is a work that will prove of constant value to all who possess and use it. w. s.

The Changing Values of English Speech. By RALCY HUSTED BELL. Hinds, Noble and Eldredge, New York City.

From the list of books and authors given the author of this interesting little book has evidently gone rather carefully into his subject. It supplements his earlier book, "The Worth of Words." To the writer and to the author it will be of value in helping to write as good English as possible. As doctors here and there are writers, and sometimes though rarely authors, they will appreciate reading it. The only mention of doctors in the book is found in these words: "The contribution of the average M.D. to medical and surgical 'literature' paralyzes one by the use of abominable English. The briefs of lawyers and the contributions of electrical engineers, especially the latter, come into this class." Physicians and surgeons, as electrical engineers, have something else to do than to write, so cannot come nigh perfection in English, as the newspaper man and the clergyman.

Seven Hundred Surgical Suggestions. New York: The Surgery Publishing Co.

This volume treats of various surgical affections in many parts of the body. It contains many valuable suggestions, but one is forced to the conclusion that in many cases the suggestions are somewhat far-fetched and not sufficiently to the point, while in other instances they are quite erroneous. For instance, they say that in acute intestinal obstruction with a large mass in the abdomen think of a twisted omentum. If an old hernia were present the suggestion would be more likely. Then they suggest that a tumor of the cheek is often a dentigerous cyst. In the first place, such a cyst is extremely rare in man; then when it does occur it is the jaw which is affected, the bone becoming expanded. Then one finds it difficult to follow the suggestions advocating perineal

drainage in all cases of internal urethrotomy upon the anterior urethra; that actinomycosis is a common cause of peripleuritic abscess; that vomiting does not as a rule relieve the pain in cholelithiasis and that hypernephroma is to be distinguished from other malignant renal tumors by the early hematuria.

There are, however, some very valuable suggestions among which may be mentioned those drawing attention to the fact that many chronic abscesses of the breast are tuberculous, that a gland (especially if calcareous) may be mistaken for a calculus in the cystic or common bile duct, that practically all cases of prolapse of the rectum in children can be cured by non-operative means as strapping the nates, recumbency, etc., and that bleeding from the base of the tongue is mostly readily stopped by pulling the whole forward with the finger.

On the whole one would find it difficult to highly recommend the book to the profession.

G. E. W.

Clinical Diagnosis and Treatment of Disorders of the Bladder, with Technique of Cystoscopy. By FOLLEX CABOT, M.D., Professor of Genito-urinary Diseases, Post-graduate Medical School; attending Genito-urinary Surgeon, Post-graduate and City Hospitals, New York. Octavo, 225 pages, 41 illustrations, 1 colored plate. Price prepaid, \$2.00. E. B. Treat & Co., 241-243 West 23rd St., New York.

In the preface to this work, Professor Cabot says:—"The chief object of this book is to teach general practitioners the principal methods of diagnosing and treating disorders of the urinary bladder, and we would say he has produced a work which will prove of very great value in this regard. Even to the many practitioners who do not possess the cystoscopic and urethroscopic appliances mentioned in this work, the mere knowledge of their use acquired by reading must be illuminating to the reader. Some of the chapters that have particularly impressed us are:—"Case-recording," "Management of the Genito-urinary Patient"; "Methods of Examining the Bladder. Separation of the Urine"; "Technique of Cystoscopy"; "Indications and Contra-indications to Cystoscopy"; and "Diagnosis and Treatment of Senile Prostatic Hypertrophy."

One feature that has particularly appealed to us is the printed instruction for patients suffering from gonorrhea or syphilis. In hospital practice much time is saved by giving the patients these printed instructions and the preventive measures they are to ever bear in mind.

Altogether we heartily congratulate Professor Cabot on his excellent work.

T. B. R.

The Canadian Medical Protective Association

ORGANIZED AT WINNIPEG, 1901

Under the Auspices of the Canadian Medical Association

THE objects of this Association are to unite the profession of the Dominion for mutual help and protection against unjust, improper or harassing cases of malpractice brought against a member who is not guilty of wrong-doing, and who frequently suffers owing to want of assistance at the right time; and rather than submit to exposure in the courts, and thus gain unenviable notoriety, he is forced to endure black mailing.

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Dominion Medical Monthly

And Ontario Medical Journal

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Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 203 Beverley St., Toronto, Canada.

VOL. XXXII.

TORONTO, MARCH, 1909.

No. 3.

COMMENT FROM MONTH TO MONTH.

Our New Editorial Staff will take charge of the April issue, and departments devoted to General Medicine, General Surgery, Psychiatry, Gynecology, Pathology and Public Health, Genito-Urinary Surgery, Ophthalmology, Rhinology, Otolaryngology and Laryngology, and Anesthetics will be conducted from month to month. The aim of this staff will be to set out as far as possible in the way of abstracts, clinical reports and practical articles of a useful character the current medical literature of the day, so that each issue will show original matter and original work. All books in whatsoever department of medical literature they deal with, will be carefully reviewed by those in charge of each department, and justly criticised. News items of interest and personals will, as heretofore, occupy a few pages; and the editorial policy will be in line with the best interests of the profession at large.

Among the many interesting Articles in the March number of the *Annals of Surgery*, we have been particularly impressed with one by William Seaman Bainbridge, M.D., Professor of Clinical Surgery in the New York Polyclinic Medical School and Hospital, entitled "The Intra-abdominal Administration of Oxygen."

This paper is a further contribution to the subject dealt with on a former occasion, when Prof. Bainbridge followed his discussion with a report of sixteen cases treated in this manner. The present paper records fourteen additional cases, making a total of thirty. Altogether, this contribution in a new field of surgical treatment seems to us a most remarkable achievement in this realm of the healing art, and one which is destined to shed great distinction on American surgery in general, and on Prof. Bainbridge in particular.

It may seem to savor of impertinence to make a brief abstract of such an epoch-marking discovery as this, but we hope (in the interest of the many practitioners in this country who may not have the good fortune to read the March number of the *Annals of Surgery*), Prof. Bainbridge will courteously sanction this attempt—brief though it be—to draw attention to this remarkable work. After pointing out the various methods that have been employed for the administration of oxygen, and after recounting a series of experiments on animals with this agent the Professor announces its administration as indicated for the following purposes:

1. To lessen shock, hemorrhage, nausea, and vomiting.
2. To overcome negative intra-abdominal pressure after removal of large tumors.
3. To prevent the formation of adhesions.
4. For its effect upon tuberculous peritonitis of certain types.
5. For its effect upon pus-producing organisms and their toxins.

He pointed out (from the experiments on animals) the following deductions:

1. Oxygen is completely absorbed in the abdominal cavity.
2. It is a slight respiratory and cardiac stimulant.

3. It has but little effect upon blood-pressure when the pressure of the gas is moderate.

4. It tends to bring an animal quickly from deep anesthesia.

5. It hastens the recovery of an animal after discontinuance of the anesthetic.

6. A pressure of more than 1,500 mm. of water may cause collapse.

7. It tends to prevent the formation of adhesions.

8. It quickly changes a dark blood to scarlet in cases of anoxemia.

9. It stimulates intestinal peristalsis.

10. It is not an irritant to the peritoneum or abdominal viscera.

Method of Administration.—The gas employed is warmed to 90 deg. to 100 deg. F., and has the following constituents: About 94 per cent. oxygen, 2.37 to 4.5 per cent. nitrogen, and a trace of carbon dioxide. It is warmed by passing through tubes lying in a basin of hot water. The tube entering the abdominal cavity has two openings in its distal end—one in the end, which is cut off obliquely, and the other in the wall of the tube, near the end. The abdominal wound is closed, except at the lower or upper end, where the free end of the tube is placed within the abdominal cavity. One interrupted stitch and a purse-string suture are introduced in the peritoneum at the site of the tube. All layers of the abdominal wall are closed up to the skin, and the stitches tied, with the exception of those in juxtaposition to the tube. These, layer by layer, are tied after the purse string stitch has been fastened. When the desired amount of gas has been introduced the tube is carefully withdrawn, and the purse string stitch tied. . . .

The amount of oxygen administered varies. If a large tumor has been removed, or a quantity of ascitic fluid, the abdomen may be inflated to the extent of the girth prior to such removal. Where no distension is present, if the liver be non-adherent to the abdominal wall, gas may be introduced till liver-dullness is obliterated. The gas is left in situ till absorbed, i.e., in from thirty-six to seventy-two hours. Prof. Bainbridge is also carry-

ing out a series of experiments to determine the effect of oxygen on the various pathogenic micro-organisms.

He makes the following tentative conclusions:

1. "Oxygen, intra-abdominally administered, has a distinct field of usefulness in lessening shock, hemorrhage, nausea and vomiting; in overcoming negative intra-abdominal pressure after removal of large tumors; in preventing the formation of adhesions, or, when broken up, lessening the liability of their return; and in influencing favorably certain types of tuberculous peritonitis."

2. In septic peritonitis sufficient benefit has been noted "to warrant the hope that further clinical experience may establish the efficacy of the gas as an adjuvant in the treatment of this condition."

The Toronto Dispensary is an institution which has done in the past, and does now, a good amount of useful work. The following advertisement under the head of "Medical" in a Toronto newspaper, amongst the other or rather below the other "specialists," seems rather out of place.

"TORONTO DISPENSARY, open daily from 12 noon to 1 p.m., for treatment of all diseases. Specialists: Diseases of the skin, Tuesday at 12; diseases of women, Thursday at 12; diseases of the stomach, Wednesday at 12; diseases of children, Tuesday and Wednesday at 12; diseases of the chest, Saturday at 12; diseases of the nervous system, Tuesday at 4.30 p.m.; diseases of the eye, ear, nose and throat, Tuesday at 2.30 p.m. Arrangements can be made for attendance on mid-wifery cases."

We respectfully suggest to the specialists of the Toronto Dispensary that they get under a different cover, and go it alone or with other associates.

Veratrum Viride in the treatment of eclampsia has been employed in the southern portions of the United States since 1836. Its use there has been widespread. From time to time good reports of it in this alarming condition, to both medical attendant and friends, have been published; and probably most every physician has sometime or other made use of it with varying results. The writer used it in one case with most marked and beneficial results. Others have used it in Canada, and one Montreal obstetrician with large experience has stated, in reporting three cases, that the induction of labor will probably hereafter not be necessary when veratrum viride is used. Probably its use in this connection is largely empirical. The latest contribution to the subject comes from Mangiagalli of Milan, published in the *British Medical Journal*, September 19, 1908. He approves of its use. His personal experience of one hundred cases in ten years must be admitted a large one. So long as the blood pressure is high, the pulse full, strong and tense, the administration of the remedy must be continued best by the hypodermatic method. Whilst those who have used it give 15 to 20 minims of the fluid extract with repetition in an hour or so, Mangiagalli prefers small and repeated doses, as by this method good results are obtained and danger eliminated. He endorses the American view that the pulse must be kept below 80. It must, however, be remembered, that when the pulse is rapid and small, and the arterial pressure low, veratrum viride must not be employed. Five to ten minims, when the blood pressure exceeds 160 millimeters will lower the blood pressure and modify or stop the convulsions. It is not claimed to be an antidote in the toxemia. Of his one hundred cases, three were moribund when admitted to the hospital, and died within a few hours. Three others had cerebral hemorrhage, as was found at autopsy. Of the remaining ninety-four only six died—a mortality of 6.34 per cent. This is certainly strongly favorable to the treatment of eclampsia by veratrum viride. Dr. Adam Wright's Text-Book of Obstetrics states that the mortality is probably about 25 per cent. Veratrum viride should certainly be included in the obstetrician's armamentarium.

The Emmanuel Movement has attracted considerable attention in the medical press of the United States as well as in Great Britain. A short history of it will prove of some interest. It originated in Boston, the American centre of art, literature and classical culture. Two years ago the Rev. Dr. Elwood Worcester, of the Emmanuel Episcopal Church, of Boston, saw an opportunity to enlarge upon his parochial work. A consumption class was formed, and they were taught how to live, what to eat, what to wear and how to think. The knowledge of what fresh air would do, what nourishing food would do, and a belief in the overruling goodness of God, seems to have accomplished much good amongst that class. This movement has grown, is said to have grown wonderfully, to the extent that several prominent physicians have sent patients to the Rev. Dr. Worcester for attention and treatment. Apparently this treatment, therefore, is not "absent" treatment, so that the Emmanuel Movement is not on the lines of Christian Science treatment. In fact the Emmanuel Movement works with the doctor and does not antagonize medicine. When a person comes to the Rev. Dr. Worcester to be healed of any disease, he is sent to a responsible physician for an exact diagnosis. If an organic disease, the case is not touched by Dr. Worcester. The doctor prescribes the medicine or does the surgery required, and Dr. Worcester takes charge of the education of the person in right living. He combines his religion with the physician's treatment. This, of course, is curing by psychological suggestion, and is a concentration of religion, medicine and psychology. There seems to be no doubt that the Rev. Dr. Worcester has helped many in material things; and we in Canada have had experience of psychological effects and impressions and cures of "the lame who are not lame," of "the deaf who are not deaf." In this Emmanuel Movement, therefore, there is nothing new. Natural and not supernatural laws govern these cures. Mesmer and Chareot are revived. But where is the wonder in these cures? It is not uncommon for physicians by a keen insight to cure and restore to health, melancholics and hypochondriacs. Is it so wonderful to cure *imaginary* diseases? Is it not more wonderful for a cancerous

organ to be removed and the patient live, a depressed fracture of the skull corrected, and the brain restored to its proper functioning condition, or thousands upon thousands of persons saved to life and from a loathsome disease by the simple little operation of vaccination? The cures of countless cases of curable diseases, real diseases, are surely far more marvellous than the cures of *imaginary* diseases.

When a doctor is accused of criminal abortion other doctors stand aghast; the community is shocked. Seldom is one convicted of the crime. It is generally in the large cities that these cases occur or are found out. They are few and far between in the towns, villages and country. Were a compilation of these cases made for the last decade, say in Ontario, it would be found that practically all occurred in Toronto. Why? Because, they lie hither. They are as it were lost in the great city. Many come to be confined. Their illegitimate condition is concealed. They return home from a visit. All doctors in a great city have probably been approached some time or other in this respect. Where most sternly and curtly refuse, one yields. Why? He needs the money. General practice in a great city is uncertain, unstable, precarious. In the country a steady income is assured. The great city is crowded. Its allurements are many. Work is comparatively easy. Life looks rosy. Thither doctors flock. There are too many of us. There is not enough sickness and not enough money to go round. The result is a fall now and again by the wayside. If we go to the fountain-head, we will find that our university is turning out too many doctors. There are not sick people enough for them to practise upon. This makes of an honest man, a criminal. It is a sad state of affairs—the freedom of education in medicine subsequently making a man a criminal. Probably our medical educators will consider and take stock of this. The responsibility is theirs. The open door into medicine is far too easily entered. Older men with acquired practices are indifferent. So the burden of responsibility rests upon the younger, for it is generally from their ranks

that the wayward one steps out. With the energy of youth, with the zeal of the strong and robust, with the might and power of their numbers, the younger members of the faculty should attack the wholesale admission into medicine and put up a determined fight for higher qualifications, longer periods of study, and curtailment of the inrush. So will criminal abortion cease.

News Items

DR. W. P. CAVEN, Toronto, has gone to Atlantic City.

SMALLPOX is said to be prevalent in several sections in Nova Scotia.

DR. S. J. TUNSTALL, Vancouver, B.C., will attend the International Medical Congress at Budapest.

MR. RODOLPHE FORGET, M.P., is submitting a plan for financing the reconstruction of Notre Dame Hospital, Montreal.

DR. CHAS. J. FAGAN, Victoria, B.C., has been re-elected Secretary of the British Columbia Anti-Tuberculosis Society.

DR. P. F. CASGRAIN, Montreal, died recently in that city after a long illness. He was graduated from Laval University in 1875.

DR. ROBERTSON, Dunchurch, has gone to Sudbury to look after the sick and injured along the line of railway construction work.

DR. H. S. BIRKETT, Montreal, was elected President of the Association of the Military Medical Officers, at the recent annual meeting in Ottawa.

DR. G. H. WADE is leaving Cobourg for Calgary to take charge of the organization work of the I. O. F. in Alberta and British Columbia.

DR. T. W. CARLAW, of Campbellford, died on the 5th of February. He had been in poor health for several months. Deceased was 45 years of age.

DR. R. W. IRVING, Superintendent of the British Columbia Tuberculosis Sanatorium, at Tranquille, states there were 47 admissions to that institution in 1908.

THE GOVERNORS of the General Hospital, Royal Victoria and Notre Dame, Montreal, are urging Montreal health authorities to establish water filtration plants in that city.

DR. J. A. ROBERTSON, of Stratford, Ont., accompanied by Mrs. Robertson, has left on the Mediterranean trip. They will sail by steamer *Cedric*, and will be gone some six or eight weeks.

DR. E. C. WILFORD, Blyth, Ont., who went over to Edinburgh, Scotland, to take a special course, has passed his examination with honors, being one of the twenty to do so out of 106 who wrote.

A NUMBER of French and English-speaking physicians of Montreal will attend the second Congress of Physiotherapeutics, in Paris, in April. Dr. Henri Lasnier, Montreal, is Secretary of the Canadian committee.

A FRIEND of McGill University, Montreal, will donate \$100,000 to that institution conditional on the Governors raising another \$400,000. Another friend has recently made an unconditional donation of \$25,000.

DR. McCOMB, of Milverton, has gone to South River to assume a practice in that place. He came to Milverton nearly two years ago, entering into a partnership with Dr. Parker, and during that time through his genial disposition and ability as a physician has won a host of friends. Dr. McComb was an excellent type of citizen, always ready to render his assistance in any good cause, and his removal will be deeply regretted, not only by the entire community, but by his former partner, Dr. Parker, who speaks in the highest possible terms of him. In social circles he and his wife, who have taken a leading part, will be greatly missed.

THE Arkansas Doctor, a picture for the doctor's waiting-room or library, is probably the latest production of this class of art. Its size is 22 x 28, and the India proofs from the original canvas are very fine. The advertisement of this appears in this issue.

OWEN SOUND sustained a loss in the death of Dr. Charles E. Barnhart, who passed away on Wednesday evening, February 10. He had been in failing health for some time. He was Mayor of Owen Sound for three years, 1889-'91-'92. Dr. Barnhart was born in Streetsville 77 years ago. He was educated in Toronto University, and Toronto Medical College. He located in Owen Sound in 1859.

OSTEOPATHY IN BRITISH COLUMBIA.—The British Columbia Medical Bill before the Legislature of that province provides for the practice of osteopathy as follows: Nothing in this Act shall prevent or prohibit any duly qualified osteopath from practising his profession for reward or gain within the Province of British Columbia from and after the passing of this Act: Provided that all practitioners of osteopathy within the meaning of this Act shall be duly qualified osteopaths of a recognized school or college of osteopathy; and for the purpose of this Act, a recognized school or college of osteopathy shall be deemed to be an institution recognized by the American Osteopathic Association: Provided, further, that before any such osteopath shall be lawfully entitled to practise osteopathy within British Columbia, such osteopath shall take and successfully pass an examination satisfactory to the Council in the following subjects: Anatomy, physiology, chemistry, toxicology, pathology, bacteriology, histology, neurology, physical diagnosis, obstetrics, gynecology, minor surgery, hygiene, medical jurisprudence, principles and practice of osteopathy: The Council, for the purpose of such examination of applicants for registration as osteopaths under this Act, shall appoint an osteopath, who shall prescribe the examination for such applicants in relation to the principles and practice of osteopathy: any duly qualified osteopath who shall successfully pass such examination of the Council of the College: Provided that such osteopath shall be restricted and shall be entitled to be registered, under this Act, as a member of the college: Provided that such osteopath shall be restricted wholly to the practice of osteopathy.

THE Minnewaska, Gravenhurst, Muskoka, is a private hospital or sanatorium for the care and treatment of tuberculous patients, opened and conducted by Mrs. E. G. Fournier, late Matron and Principal of the Training School at Ann Arbor University Hospital, and sometime Superintendent and Principal of the Training School at Hope Hospital, Fort Wayne, Indiana. This private sanatorium will be conducted under the personal supervision of Dr. C. D. Parfitt, Gravenhurst, formerly physician-in-charge of the Free Hospital for Consumptives at Gravenhurst. The rates are to be \$8 to \$15 per week, according to situation of room, and will include all ordinary nursing, medicines, etc. Medical fees are not included. This is a new departure in the treatment of tuberculous patients in Ontario; as such may it meet with due encouragement.

THE annual meeting of the Lambton Medical Association was held at Sarnia. Owing to the stormy weather the attendance was not as large as usual. Those present were Drs. Logie, Wilkinson, Henderson, McDonald and Bradley, of Sarnia; Newell, of Watford; Calder, of Petrolia; Brown, of Camlachie; Reid, of Wyoming. The principal business transacted was the annual election of officers, which resulted as follows:—

President, Dr. Chapelle, Wyoming; Vice-President, Dr. Bradley, Sarnia; Secretary-Treasurer, Dr. McDonald, Sarnia; Auditors, Drs. Logie and Bradley, Sarnia.

Committee on Ethics—Drs. Newell, of Watford, Dunfield, of Petrolia, Hubbard, of Forest.

There were to have been several papers given by different members of the association, but the stormy weather prevented their attendance, so the members informally discussed several questions before adjournment. The next meeting will be held on the second Wednesday in May, at Camlachie.

MEDICAL MEN IN WESTERN CANADA. —An important general meeting of the medical profession was held at the Medical Library Winnipeg, Saturday evening, Feb. 27, to hear an address by Dr. Brett, of Banff, upon the question of the medical situation in the West. The meeting was presided over by Dr. Todd, who dwelt upon the importance of reciprocity between members of the profession throughout the four western provinces. He pointed out that Nova Scotia had already made the first advances in this direction and was willing to admit graduates of other provinces to practise in that province provided the same privileges were ex-

tended to its own graduates. Dr. Brett pleaded eloquently for the burial of petty dissensions among members of the profession and urged the establishment of a central western examining board, which would grant a license to graduates of the various provincial medical colleges, which would enable them to practise at will in any of the provinces. So far as his province was concerned, they were strongly in favor of such federation of the provinces for the purpose of giving one examination and issuing one license. He deplored the fact that the bill framed by Dr. Roddick, having for its purpose one examination for the Dominion, had been killed through opposition from Quebec and Ontario. It was embarrassing to answer the question frequently put by the laity as to why a graduate of one provincial college could not practise in another province. It would appear as though professional jealousy kept them within narrow confines. In framing a scheme as proposed, the most contentious detail was as to whether the effect of the examination should be retroactive or not, and though there was considerable difference of opinion on this subject, it would appear to be in the best interests that the measure should not be retroactive and that all who desired to practise in the four provinces should be compelled to take the special examination.

Dr. Chown, Dean of the College of Physicians and Surgeons, said that he was satisfied that for a long time the men of the profession in Manitoba at least, had been practically unanimous in their desire for a scheme that would throw open the portals of work for their graduates in the widest way possible throughout the Dominion. He was strongly opposed, however, to any method which would compel intending practitioners to take two examinations—their own provincial examination and the special examination for the four provinces. Under the system proposed they would have to do this in order to get their degree, as the special examination would grant only a license to practise. The system of several examinations was a disgrace and a shame to the medical profession of Canada. (Applause.)

Dr. Patterson said that his views on the subject were set forth at length in a letter he had written to the current issue of the *Western Canada Medical Journal*, but that he was heartily in favor of some such scheme as proposed.

Dr. Milroy spoke at length upon the relation of the University to the College of Physicians and Surgeons in Manitoba, and thought that if the imaginary boundary lines could be swept away it would prove an immense benefit, not only to the profession, but to the general public.

Dr. Nichols thought the views enunciated would meet with

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general approval. Dr. Harry J. Watson also spoke and said that the establishment of a central examining board would do much in the way of securing reciprocity with Great Britain. Western graduates desiring to take post-graduate courses in the old country were compelled to pass a special examination before they could register, a proceeding so expensive as to be in many cases prohibitive.

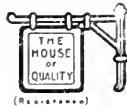
Drs. Hughes and Hunter also participated in the discussion and a committee was appointed to bring in a resolution to consider the appointment of a number of delegates who would tour the provinces in order to ascertain the feeling of the profession, their expenses to be borne by the various medical councils.

Publishers' Department

Wellcome Photographic Exposure Record and Diary for 1909 has been received. The physician doing amateur photography will appreciate one of these. It contains besides some fifty to sixty pages ruled for recording details of negative exposures, a great deal of valuable information.

HYPERTROPHY OF THE PROSTATE, with urinary blockage, is a relatively common condition. These patients should be constantly under their physician's observation and advice. They should be warned of the complications and familiarized with the importance of aseptic precautions, and in the use of sammetto to avoid the establishment of catheter life.

ETIOLOGY AND TREATMENT OF NEURALGIA FROM A CLINICAL STANDPOINT.—John S. Moreman, M.D., in writing under the above title says:—In general terms, I may say, neuralgia is the outgrowth of any disease process which tends to diminish the vital forces, and to deprive the tissues of an adequate supply of nourishment, or such nourishment as is necessary to keep the tissues adequately in repair. When the tissues are inadequately nourished, their vigor and power of resistance is lost, and the estab-



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ishment of neuralgia may supervene at any time. We may expect to see neuralgia proceed from a lowered physical power incident upon constitutional syphilis, and also upon exposure to malarial infection. In fact, malarial influence is a most potent factor in the production of neuralgia. The treatment of neuralgia comprehends local applications of various kinds, the administration of remedies for the removal of the cause, remedies for the relief of the pain, and the application of certain surgical measures looking toward the removal of tumors, or any other growth upon which the neuralgia may depend. I employ opium now only when the pain is so intense that death is imminent from its effects. Opium and its alkaloids are supplanted now in my hands by antikamnia tablets which relieve speedily and carry no disagreeable after-effects. When malaria is the cause we will have to depend on quinine, which we can give in combination with antikamnia in the form of antikamnia and quinine tablets, each tablet containing $2\frac{1}{2}$ grains antikamnia and $2\frac{1}{2}$ grains sulph. quinine.

SWABBING out a sinus filled with exuberant granulations with glycerin will often dehydrate them, making them fresh and healthy.

STRETCHING the anal sphincter alone will in many instances relieve an intense pruritus or a small prolapse of the anal mucous membrane.

A high temperature just after or during an abortion is evidence of intra-uterine manipulation, especially if the discharge from the uterus is fetid.

A tumor in the soft parts of the cheek near a tooth cavity is often a dentigerous cyst. If the tumor is hard an odontoma may be diagnosed.—*American Journal of Surgery*.

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXII.

TORONTO, APRIL, 1909.

No. 4.

Original Articles

KRAUROSIS VULVAE.

BY FREDERICK WILLIAM MARLOW, M.D.C.M., L.R.C.P. (LOND.),
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General Hospital.

The condition known as kraurosis vulvae is one about which very little has been written, but there is no doubt that to it may be attached such importance that it should be remembered whenever a case of pruritus vulvae presents itself, and more especially when one fails to discover readily some apparent cause for the pruritus, or when such is not relieved by ordinary treatment.

It has long since been recognized that a very frequent precursor of carcinoma of the tongue is found in the condition of chronic superficial glossitis, and more especially when such produces leukoplakia. Similarly, there are many who hold the idea that kraurosis and leukoplakia vulvae frequently forego the occurrence of carcinoma vulvae. One is prepared to accept this idea, but one cannot accept the dictum of those who say that carcinoma vulvae is always preceded by kraurosis, having in mind a recent case of a negress, aged thirty-three years, who on admission to the hospital had an advanced, inoperable, carcinomatous condition of one side, while the labia of the other side were practically normal, though they became involved later during the nine months' duration of the disease before a fatal termination. As to the exact nature of the disease, present knowledge is indefinite.

It partakes of the nature of a chronic superficial vulvitis, but what the exciting cause is remains unknown.

It is characterized by a chronic, progressive atrophy of the vulvar parts. The labia minora, and later the majora, gradually decrease in size and disappear. The clitoris becomes small and retracted. The vulvar hairs become scanty, the muco-cutaneous covering dry, smooth and shiny, and the ostium vaginae contracted. There is a tendency to hyperplasia of the epithelium, with the formation of leukoplakic patches. These may disappear, or may be found in different areas at different periods. In the later stages the condition seems to favor the occurrence of carcinoma. In the earliest stages, during which the disease is seldom observed, some writers have described the presence of small, but extremely sensitive, reddish-brown spots, in the region of the vestibule and the labia minora. If present at all, these disappear as the disease advances.

This disease is one of later middle life, coming on about the time of the menopause, and the changes by which it is characterized may be due to an exaggeration of the changes occurring naturally at that time. Some writers say it is more common in married women who are sterile, but from the few cases that one has seen one might conclude that marriage or child-bearing have little, if any, bearing as factors in the etiology of the disease. Mrs. M——, seen in November, 1908, in a fairly advanced stage of kraurosis vulvae, was forty-nine years of age, had just passed the menopause, and was the mother of three children, while in the case to be reported in detail the patient was forty-six years of age, at the menopause, and was unmarried.

Itching is the chief and often the only symptom complained of, but this, in spite of medication by ointments, lotions or powders, is sometimes intolerable. Married women may complain of dyspareunia, and in cases where the contraction of the ostium vaginae is extreme, if the menopause has not been reached, the menstrual blood may be retained in the vagina, or escape only with difficulty, or after artificial dilatation of the ostium. Some urinary symptoms may be mentioned, but if present they are usually due to a coincident urethral caruncle.

Following are the notes made of a case on her admission to St. Michael's Hospital, under my care, on November 2nd, 1905, having been seen in consultation one week previously:

A—— M——, female, aged forty-six years, unmarried, referred to me by Dr. George Fish, of Brougham, Ont., complains of itching of the vulva and an ulcerating sore in the perineum.

Family history.—Her father died suddenly at eighty-seven years of age, presumably of apoplexy. Her mother died from childbirth at the age of forty-two. Five brothers are living and well, one died from paralysis, and another from phthisis. Four sisters are living and well. There is no further history of tubercle nor of nervous disorders, and none of malignant disease or syphilis.

Personal history and present illness.—She has always lived at home, on a farm, doing housework, and was very active, being able to climb apple trees with considerable agility. She had measles when a child, but does not remember any other disease. Her general health has been good. Her menstrual periods have occurred with normal regularity until quite recently, and the present irregularity and scantiness would seem to be associated with the menopause.

Ten years ago she began to suffer from itching of the vulva. This was somewhat worse at night, and gradually became more troublesome. A small amount of relief was experienced from the use of sedative ointments.

Four years ago she submitted to examination, and her physician recognized an atrophic condition of the vulva, associated with a peculiar whitish appearance of its epithelial covering. Sedative lotions and ointments were applied. Mercurials and iodides were administered, and the patient was but little relieved.

Of late, owing to the intensity and persistence of the itching, she has become very miserable and averse to mingling with friends, on account of the almost intolerable desire to scratch or rub the itching part.

Six months ago a small "pimple-like" lesion appeared in the perineum, about midway between the vagina and the anus. This was treated with canthar, but gave place to an ulcer, which has since then continued to enlarge, in spite of any treatment adopted.

Physical examination.—The general condition of the patient is good. Her hair is somewhat excessively gray, and although she is a large woman, there is an over-abundance of subcutaneous fat in the region of the hips. Otherwise, there is nothing special to note, except the local condition.

The pubic hair is scanty and very dry. The vulvar orifice is funnel-shaped, owing to marked atrophy of both the labia majora and minora, not a vestige of the latter being visible. The clitoris is retracted. The mucocutaneous covering is dry, smooth, firm and shiny. Surrounding the anterior part of the ostium

vaginae and in the region of the clitoris and the vestibule, is a slightly raised, dry, firm, whitish patch. For the most part it is smooth on the surface, but it presents a few small projections. One of these, much larger than the others, is situated to the left of the atrophic vestibule. According to her physician's statements, the area immediately posterior to the ostium vaginae had previously presented a similar appearance.

The ostium vaginae is contracted, so that it admits the index finger with difficulty. The surrounding tissue is so dense that dilatation would seem to be impossible without laceration. The patient says that her physician had to dilate the opening a few months previously, to prevent retention of her menstrual blood in the vagina.

Situated in the perineum, between the anus and the vulvar orifice, and slightly nearer the latter, and encroaching to a greater extent on the right of the middle line, is an ulcer which is nearly round and about one inch in diameter. Its base is firm, more depressed in the centre, and is covered by large, irregular granulations. Its edges are somewhat everted and markedly indurated. The immediately surrounding tissues seem to be slightly infiltrated. There is no palpable enlargement of the inguinal glands.

Beyond the area described there is considerable pigmentation of the skin.

The diagnosis was plainly evident, and the three conditions revealed, namely, kraurosis, leukoplakia and carcinoma vulvae, might without undue presumption be taken in that order as a logical sequence in a progressive disease, though it is true that the disease may terminate spontaneously, or apparently so, before the later and more serious stages ensue.

The accompanying photograph, taken for me by Dr. Greenway, serves to aid in the appreciation of the condition described.

Operative treatment was advised and employed. This consisted in a wide and deep removal of the ulcer, together with complete denudation of the skin and mucous membrane surrounding the ostium vaginae, the clitoris and all the affected area being included. A considerable amount of dense tissue surrounding the ostium was removed, in order to enlarge the ostium and to free the vaginal wall. Hemorrhage was not troublesome, the blood being washed away with a constant stream of sterile water. The only vessels requiring a ligature were the dorsal vessels of the clitoris. To effect closure, the skin edges in front of the vagina and urethral orifice were approximated by means of fine silk. The deep wound behind the vagina was closed with silk-

worm gut, and to complete the operation fine silk sutures were used to join the edges of the vaginal wall and the urethra anteriorly to the remaining parts of the skin edges.

Primary healing occurred in all except the area posterior to



From Photograph Showing Kraurosis, Leukoplakia, and Carcinoma Vulvae.

the vagina, where the tension was considerable. During the first five days the urine was drawn off by a catheter.

Healing was complete in six weeks, and the patient was quite comfortable, and in her subsequent history there was no return of pruritus, and no recurrence of the disease locally.

Microscopical examination of the ulcer revealed a carcinomatous condition. For almost a year she remained perfectly well, and though she was warned to watch for any swelling in the groins, she had neglected to do so after a few months, and it was not until she ran against the edge of a table one day that her attention was redirected to her groins. At that time she detected a lump on one side, and a few weeks later on the other side as well. Their size increased rapidly. On November 7th, 1906, she was sent to me by her physician, on account of the swellings. The one on the left side had been observed for six weeks, and that on the right for two weeks. Pain was practically absent, and there were no unusual circulatory phenomena in the lower extremities.

Examination of the vulvar orifice and the perineum revealed a most satisfactory condition. The cutaneous covering was normal in appearance, soft and pliable, and the ostium vaginae dilatable, so as to easily admit the index finger. Situated in the groin on either side was a very firm mass, which felt somewhat larger than a hen's egg. On the right side it was easily movable, but on the left side it was fixed to the underlying structure.

She was again admitted to St. Michael's Hospital, and operation was undertaken, and the masses removed by as wide a dissection as possible. On each side the internal saphenous vein, with its three small inguinal tributaries, was dissected from the deeper part of the mass, and on the left side the dissection was extended to include a portion of the aponeurosis of the external oblique muscle, of fascia covering the pectineus muscle, and of the anterior wall of the femoral sheath. A part of the deeper portion of the left mass had degenerated so as to be of fluid consistency.

The wounds were sutured with silkworm gut, and firm pressure applied to obliterate the cavities. Healing occurred primarily, but on two occasions it was necessary to evacuate a rather thick serous-looking fluid. There was no interference with the lymphatic circulation of the lower extremities.

Microscopical examination of the masses revealed a carcinomatous condition.

Subsequent to this there was no recurrence on the right side, but after two months nodules appeared in the scar of the left side. She was admitted to the Toronto General Hospital, and these were dissected away, the wound healing promptly. When seen about two months later still there was a further recurrence on the left side, and further operation was not advised.

In May, 1907, the mass ulcerated, and a streptococcic infection, producing a wide, erysipelatous condition, nearly terminated fatally. She recovered from this, however, and her decline was gradual. The area of ulceration increased, but at no time did any serious hemorrhage occur. Neither were any signs of metastasis observed. Gradually growing weaker, she died on October 15th, 1907, a very little short of two years after the first operation.

In reviewing the points of the case, it is clearly evident that had the glands been removed earlier when involved, the prognosis might have been improved, though it is possible that the result might have been the same, but the question that naturally arises is this,—should kraurosis vulvae be treated by operative procedure? One's answer to this would be modified to suit the conditions. In the early stage, when recovery may be reasonably looked for and the signs are not prominent, the treatment should be palliative. In the later stage, when the mucocutaneous changes are well established and the pruritus is intolerable, or not easily relieved, operation is indicated for the sake of the relief it affords, and also for the assurance it gives against the future. When leukoplakia is found with kraurosis, operation is urgently indicated as the best means of affording relief, and the surest safeguard against the occurrence of carcinoma.

A report of the histological examination by Dr. Oliver R. Mabee is appended.

Sections were examined from the skin covering the vulva, the ulcer, the warty projection on the left side, and the masses removed from the inguinal regions. The changes in the skin and subcutaneous tissues are of two varieties, hypertrophic and atrophic. These conditions gradually change from one to the other. In the hypertrophic areas there is hyperplasia of the cells of the rete malpighii, a lengthening of the papillae, and an infiltration of the derma and subcutaneous tissues, with small mononuclear lymphocytes and eosinophiles. The atrophic areas show an apparent atrophy of the rete malpighii, a flattening of the papillae, and a fairly evident fibrosis of the derma and subcutaneous tissues. The inflammatory cells in these latter areas are much fewer in number than in the hypertrophic areas.

The section through the edge of the ulcer shows an ulcerating surface, covered with granulation tissue at one end. There is a marked inflammatory change in the subcutaneous tissues below this. In the middle part of this section the epidermis is still present, but the papillae are hypertrophied, and the underlying

derma shows moderate inflammatory changes. In the other end of the section the derma and subcutaneous tissues are infiltrated with numerous polyhedral epithelial cells. These occur in reticular masses, supported by a moderate amount of connective tissue stroma. Frequent mitoses are present in these cells. The tissues surrounding this growth of epithelial cells show fairly marked infiltration with inflammatory cells. No epithelial pearls are present. The warty projection shows a thickened stratum corneum, and hypertrophied papillae, surrounded by slight inflammatory infiltration.

The inguinal glands are invaded by masses of epithelial cells similar to those described above.

Summary of histological findings:

1. Hypertrophic areas in the epidermis, with infiltration with inflammatory cells, of the derma and subcutaneous tissue.
2. Atrophic areas in the epidermis, with marked fibrosis of the derma and subcutaneous tissue.
3. Superficial carcinoma of the vulva, non-carcinifying.
4. Papilloma of the vulva.
5. Secondary carcinoma of the inguinal glands.

417 Bloor Street West.

REMARKS ON THE TREATMENT OF ACUTE LOBAR PNEUMONIA.

By GRAHAM CHAMBERS, B.A., M.B., TORONTO.

Physician, Toronto General Hospital; Associate Professor in Clinical Medicine, University of Toronto.

In the course of acute lobar pneumonia in the adult there are certain symptoms which are looked upon as danger signals. Of these the following are some of the more important:

1. Severe disturbances of the nervous system, such as continuous delirium, excitement with complete insomnia, muscular tremors, and typhoid state. Active delirium, like *delirium a potu*, is particularly dangerous.

2. Tympanites in the later stages of the disease.

3. Respiration rate above 50.

4. Pulse frequency about 135. Irregularity and low tension of pulse increase the danger.

5. Cyanosis of a marked degree.

6. Very high temperature. The prognosis is best as a rule when the temperature ranges from 103 deg. to 104 deg. In severe pneumonia there may be little fever.

7. Prune-juice sputum.

These signs are all dangerous, but, of course, not to the same degree. All should be kept in mind in the treatment of the disease. Moreover, one should attempt to prevent their appearance. If one fail in this, then measures should be adopted for their relief. The object of this paper is to state briefly the writer's view on the treatment of pneumonia, which has a bearing on these dangerous signs referred to above.

The care of the nervous system is of first-rate importance in the treatment of pneumonia. There are few cases which do not require treatment in this regard. My experience teaches me that restlessness, insomnia and delirium are important factors in the genesis of the asthenia of the neuro-muscular system which is such a serious condition in severe cases. One should therefore attempt to mitigate the effects of these disturbances of the nervous system by measures tending to induce sleep and diminish restlessness and delirium. These should be instituted from the beginning of the disease.

High fever is injurious to the patient. It frequently causes restlessness and insomnia and, if long continued, injures the

heart. If, therefore, the temperature become high (over 104 deg.) the patient should be sponged with tepid or cold water. By this measure we can reduce the fever, stimulate the respiration, diminish restlessness, and induce sleep.

If one is forced to have recourse to drugs to control temperature, one should select quinine. It should be given in large doses, 20 to 30 grains a day.

The placing of the patient in the open air generally has a beneficial effect. Since I have adopted the open-air treatment of pneumonia, insomnia and other disturbances of the nervous system do not appear to be so common. Why a patient in the open air should do better than in a well-ventilated room I am unable to fully explain. Possibly the stimulation of the face and mucous membrane of the nose by the cold air may have a stimulating effect on the respiratory apparatus. This might lead to better aeration of blood and improvement of the general condition of the patient. However, this does not seem to me a sufficient explanation of the benefit one obtains from the open-air treatment. Another explanation is that the placing of the patient in the open air has a beneficial psychic effect. A more hopeful state of mind is engendered, which we all know is very essential in the successful treatment of disease.

Insomnia is a symptom which should receive special attention. It is very common in pneumonia. Some patients being continually disturbed by the cough and pain are only able to obtain a few minutes' sleep at a time. This is insufficient to give the necessary rest to the patient's nervous system. The best remedy for this form of insomnia is, I believe, morphine. One-eighth of a grain, given hypodermically, may be sufficient, but frequently one-quarter, and occasionally three-eighths must be given before the necessary rest is obtained. It is not well to give a large dose at one time. In presence of much exudate in bronchial tubes, morphine should not, as a rule, be given. Marked cyanosis, due to asthenia of cardio-vascular and respiratory systems, is another contra-indication to its use. However, this symptom is not common in the earlier days of the disease.

Another type of insomnia is occasionally observed in pneumonia. It is characterized by wide wakefulness of the patient. The patient longs for sleep, but is unable to get it, even for a minute. In these cases I use trional or veronal in addition to the morphine.

The writer is aware that many physicians deprecate the use of morphine in pneumonia. How this idea arose I cannot

imagine. Possibly from experience in its administration in later stages characterized by cyanosis, typhoid state, etc., in which conditions it is contra-indicated. In the earlier stage the conditions are usually quite different, and it is in these that morphine is of value. Possibly in some cases its exhibition entails danger, but we must remember that pneumonia is a dangerous disease, and in relieving symptoms of serious import, one must be occasionally slightly hazardous. If one has an alternative of two dangers, one should select the lesser.

In the treatment of nervous disturbances alcohol is sometimes of service. It appears to me to be particularly valuable to middle-aged and elderly patients with arterio-sclerosis. In the treatment of alcoholics, considerable alcohol in the form of brandy or whiskey should always be given.

Tympanites in the earlier stages of the disease is frequently due to fermentation in stomach and intestines. This usually results from errors in selection of dietary, such as the drinking of large quantities of milk. The treatment of this form of tympanites should be principally preventive. The bowels should be regulated, and a dietary selected which will not overburden the stomach. Whites of eggs, junket, preparations of gelatine, broths fortified with protein preparations such as somatose, and milk, are useful foodstuffs. During the later stages the dietary should be somewhat restricted inasmuch as the assimilative power of the patient is usually diminished. In addition to dietetic therapy, drugs may be required. Of these, I think, oil of turpentine and strychnine are the best.

Another form of tympanites is principally due to asthenia of the neuro-muscular system. It is usually observed during the later stages of the disease and develops *patri passu* with the asthenia of the cardio-vascular system.

When developed to a considerable degree it is always a dangerous symptom because it is a sign of a serious condition of the neuro-muscular system, and its presence interferes with the action of the heart and lungs.

The treatment should be first preventive. All measures, such as fresh air, mental rest, regulation of temperature, etc., which are of value in the treatment of pneumonia, in general, are preventive of tympanites. Every remedial agent which tends to prevent asthenia of the nerves and muscles is indicated. Moreover, one should administer drugs to stimulate the neuro-muscular system of the stomach and intestines. Strychnine and eserine are the most potent in this regard. I invariably commence the administration of strychnine early in the course of the disease in

every case in which there appears to be danger of marked asthenia. The exhibition of eserine is commenced at the first sign of meteorism of asthenic origin. One-fiftieth of a grain, given hypodermically every four hours, is a fair dosage.

One should mention that tympanites in pneumonia is frequently due to both asthenia and fermentation.

I may also state that in addition to the remedies mentioned above, local applications of moist heat to the abdomen and enemata containing turpentine are of therapeutic value in tympanites.

Cyanosis is a common symptom of pneumonia. In some cases it develops suddenly, frequently on the second, third or fourth day of the disease. Physical examination of the patient usually reveals rapid extension of the morbid condition in the lungs. This affords an explanation of the origin of the cyanosis. The right ventricle is unable to accommodate itself to the rapid increase in work, thrown upon it as a consequence of the obstruction in the lungs. As a result it dilates to a greater or less degree, and it is unable to force the normal quantity of blood through the pulmonary capillaries, which perversion results in cyanosis. At its beginning the radial pulse may be regular, and of high tension.

This kind of cyanosis, when of considerable degree, calls for immediate relief. The work required of the right heart should be quickly diminished. This can be effectively done in only one way, and that is by venesection, which I am satisfied is the proper treatment. The bleeding should be free, twenty to thirty ounces being taken at one time. The advantage gained by bleeding is that the right heart is relieved of some work, and given time to gather strength.

Another type of cyanosis is due to asthenia of the respiratory and cardio-vascular systems. It usually occurs in the later days of the disease. At the beginning one invariably notices an increase in the rapidity of pulse and respirations. The tension of the pulse is diminished. In many cases the hands look pale, while the nails, central parts of cheeks, ears and lips have a bluish hue. If one examines the lungs, signs of passive congestion may or may not be present.

The treatment of this kind of cyanosis should be both preventive and symptomatic. In the preventive treatment, fresh air, protection of nervous system, and other measures used in the general treatment of pneumonia are indicated. In addition one should administer remedies to counteract the effect of the asthenia, before marked cyanosis appears. Strychnine is useful for this pur-

pose, inasmuch as it stimulates both the respiratory and vasomotor centres. The stimulation of the respiratory centre increases the depth of the respirations, which diminishes the work of the right ventricle, and tends to improve the aeration of blood. The stimulation of the vasomotor centre contracts the vessels, and raises the blood pressure, which increases rapidity of flow of blood in peripheral vessels. Digitalis is another drug very valuable in preventing the appearance of cyanosis. Its action is principally on the cardio-vascular system, and especially on the muscles of the heart and vessels. It increases the tonicity of the muscular tissue of the cardio-vascular system. It also slows the rhythm of the heart. The blood pressure is raised. All these pharmacological actions are indicated in the asthenia of the cardio-vascular system, of lobar pneumonia. In the exhibition of digitalis one should exercise care. The only preparation of it which can be continually given hypodermically is the drug called digitalin. This, according to my experience, is very variable in strength. In some cases one obtains an action from one-hundredth of a grain, while in others, one-thirtieth must be given before there is any perceptible effect on the pulse. For this reason I invariably use the crude drug or a galenic preparation of it, such as the infusion, tincture or fluid extract. A point of importance in the administration of preparations of digitalis is to remember that the pharmacological action develops somewhat slowly. For this reason I believe it is well to begin its exhibition early in the course of disease if one thinks the drug is indicated, and there are no contra-indications to its use. The question is, What are these indications and contra-indications? In my opinion it is contra-indicated in conditions of high arterial tension without symptoms of weakness of cardiac muscle. In states of high blood pressure, associated with cardiac weakness, digitalis is usually indicated, provided special care is exercised in its use. In states of normal or sub-normal blood pressure it is usually indicated. I may add that in my opinion digitalis is of great service in the treatment of pneumonia.

In the symptomatic treatment, in addition to strychnine and digitalis, other efficient drugs are caffeine, camphor and atropine.

Caffeine is a very valuable drug in certain states in pneumonia. It has a wide range of stimulation. It stimulates the cerebrum, medulla, spinal cord, heart muscle and kidneys. All these actions may be of value in the latter stages of pneumonia, particularly if the patient be in the typhoid state. In the earlier stages conditions are different. The patient is usually restless.

and has difficulty in procuring sleep. In this state caffeine may aggravate the sleeplessness. However, in conditions characterized by mental depression, rapidity of pulse and respirations, and cyanosis, caffeine may prove of immense service. It is best administered hypodermically. A solution may be made by dissolving equal parts of the alkaloid and sodium salicylate in water. I usually give one or two grains of caffeine every four hours.

Camphor is another efficient drug. It is soluble in almond oil, in which vehicle, sterilized, it may be administered sub-cutaneously. The dose should be about ten grains every six hours. Camphor stimulates the central nervous system, and frequently slows and improves the character of the pulse.

Atropine is of value, principally on account of its stimulating action on the respiratory centre. It is probably the best respiratory stimulant which we possess. It should always be given hypodermically; and is indicated in cyanosis, especially when the respirations are shallow.

The term prune-juice is used to characterize sputum when it is of the consistency of the juice of stewed prunes. It is usually held to be of grave significance. In many cases it is a manifestation of edema of the lungs.

The treatment is similar to that of cyanosis, keeping in view the fact that there is an absence of vasomotor nerves in the pulmonary arteries.

Medicine

GRAHAM CHAMBERS, R. J. DWYER, GOLDWIN HOWLAND, GEO. W. ROSS, WM. D. YOUNG.

Psychology and Psychogenesis of Hysteria and the Role of Sympathetic System. SAVILL (T. D.). *Lancet*, Feb. 13, 1909.

Savill believes that the hysterical temperament is inherited and irradicable, although subject to educational influences. The main characteristics of the class are the (1) Instability and variability of all forms of mental states; (2) the inability to concentrate the mental powers for prolonged periods, voluntary attention being affected while spontaneous attention (*e. g.* looking at bright objects, etc.) is normal; (3) the tendency to mental abstraction.

Psychologists explain the condition by such theories as Charcot's self-hypnotism; Savage's mental or insane derivation; Janet's retraction of the fields of consciousness; Freud's "reminiscence" of mental or emotional shock.

Savill, while admitting the psychogenic origin of many cases of hysteria, personally believes that many have a true physiologic origin based on a vaso-motor neurosis dependent on the sympathetic system.

GOLDWIN HOWLAND.

The Treatment of Patients with Hemiplegia Resulting from Cerebral Apoplexy. LESZYNSKY (W.), M.D. *N. Y. Medical Record*, Feb. 27, 1909.

During the acute stage, demand absolute physical and mental rest. Venesection is indicated in cephalic congestion, and high blood pressure, but contra-indicated in pale individuals with rapid, weak pulses or when thrombosis is possibly the cause. Apart from venesection, either aconite in 2 to 3 minim doses or the plan of tying a ligature about the extremities, may be used to lower pressure, while croton oil and chloral fulfil symptomatic indications.

Thrombosis demands higher blood pressure, so use caffeine, strychnine or strophanthus.

Syphilitic etiology suggests iodides, and nephritis accompanied by uremic coma or convulsions indicates the withdrawal of 50-70 cc. spinal fluid.

Of symptomatic interest is the statement, that the fibres of the trapezius supplied by the spinal accessory are paralyzed while those of the sterno-cleido-mastoid escape. GOLDWIN HOWLAND.

Respiratory Signs in Chorea Minor. GRAVES (W.), *Journal American Medical Association*, Jan 30, 1909.

In chorea implication of the respiratory muscles is evidenced by five main conditions:

1. Irregularity in the amplitude of movement and sudden halts, either in inspiration or expiration.
2. A sudden deep inspiration of excessive amplitude succeeded by a sudden explosive expiration.
3. Relative decrease in the normal expiratory phase and increase in the inspiratory pause.
4. Sudden changes from abdominal to costal breathing and nausea.
5. The respiratory rate is frequently accelerated.

GOLDWIN HOWLAND.

Insomnia—Its Pathogenesis and Treatment. GORDON (Alfred), *Therapeutic Gazette*.

The anatomical and etiological basis of sleep are variously theorized over by different writers:—

Insomnia, according to the writer, is due to various causes, namely, incidental, physical and mental; local pain; states of poor nutrition; visceral disorders, as cardiac, renal and dyspeptic conditions; infections and intoxications and finally organic and functional diseases of the nervous system and psychoses. As direct causes of insomnia in psychoses, he cites the state of the circulation and of the blood pressure, also toxemias.

The treatment advised must depend on the causes outlined, but mainly include: Care in dietary (which should be light, and not taken too late at night); warm baths of varying duration; other hydrotherapeutic means; mental gymnastics; psychotherapy, and lastly the usual hypnotics.

GOLDWIN HOWLAND.

Surgery

WALTER McKEOWN, HERBERT A. BRUCE, W. J. O. MALLOCH,
WALLACE A. SCOTT, GEORGE EWART WILSON.

Fractures of the Olecranon. *The Lancet.*

CORNER (E. M.), says that most of the fractures of the olecranon are due to direct violence, the fracture line being generally about the level of the head of the radius. The amount of separation is dependent largely upon the tear of the adjacent parts of the capsule. Not infrequently the only sign of fracture is a line of tenderness extending transversely across the bone. Where there is little or no separation of fragments the best treatment is by a sling and massage, followed later by passive movements. When there is separation the fragments should be wired as soon as the condition of the skin permits. It does not matter whether silk, copper wire or silver wire be used, and the only object of such internal splintage is to allow early movement and thus prevent any adhesions of the upper fragment to the humerus, which is the real cause of the resulting limitation of movement in certain cases. After about three weeks the wire becomes loose and is of no more use. Union is practically always by fibrous tissue, and this is as a rule as good as bony continuity.

GEORGE EWART WILSON.

Pulmonary Gangrene and Abscess. *Montreal Medical Journal.*

ARMSTRONG (G. E.), in a recent issue says: Pulmonary gangrene and abscess cannot be differentiated in the vast majority of cases. Of the fourteen cases recorded none could be ascribed to the presence of a foreign body. Six were secondary to a pneumonia and probably all these were aspiration pneumonia. Foul-smelling purulent sputum containing elastic tissue indicates pulmonary abscess or gangrene, or both. A bronchiectatic cavity is often very hard to differentiate. The X-rays are invaluable in healing the abscess or gangrenous area. The exploring needle is inadvisable as the two layers of the pleura may not be adherent. Tubercular cavities are not suitable for operation. Only rarely

is one justified in operating for bronchiectasis, and the same may be said of operative procedures for the relief of large hemorrhages in these abscesses. If possible local anesthesia should be used. Operation should be as early as circumstances permit, since the wall becomes thick and hence unyielding if of long duration. One or two ribs are resected over the cavity and if the pleurae are not adherent the cavity is packed with gauze for a couple of days, or if urgent suture them at once and enter cavity with the galvanocautery. The cavity when found may be gently swabbed out with gauze and drained. Sudden death during or immediately following the operation is not uncommon and hence the advisability of local anesthesia. No cause can be found postmortem for these fatalities. Fistula is rare and when present is usually due to a complicating empyema. The mortality in fourteen cases was 28½ per cent.

GEORGE EWART WILSON.

Intussusception. *The Post Graduate*, January, 1909.

ERDMANN (John F., M.D.), reports 11 cases in infants from 4 to 22 months old. In 4 excision was done and all died. The remaining seven were reducible and all recovered. Quoting from a previous paper he urges the diagnosis to be made not from the presence of tumor but by bloody and slimy stools together with sudden cramp-like pains in a healthy child. Tumor is present in less than 50 per cent. of the cases. Rectal examination is important, as one may feel the tumor or the finger may show blood and mucus. Early operation is advised and is opposed to injections of any kind as they are seldom of any use and may be harmful. If the cases are got within six hours operation should save practically all. He makes his incision through the middle third of the right rectus and avoids reducing the mass by pulling. He removes the appendix at the time in all cases. In the after-treatment sufficient paregoric is given to control peristalsis, and a firm abdominal binder is put on.

GEORGE EWART WILSON.

Pathology and Public Health

JOHN A. AMYOT, O. R. MABEE, GEO. NASMYTH.

A New and Simple Method for the Serum Diagnosis of Syphilis.

Noguchi (Hideyo). *Jour. Expt. Med.*, March, 1909.

This very much simplified method of the Wasserman reaction for the diagnosis of syphilis may be readily carried out in the ordinary hospital or physiological laboratory by any one familiar with ordinary laboratory technique. It may, if the author's suggestion be carried out by commercial biological laboratories, be even performed by the practising physician, for the standardized sera necessary will be then obtainable on paper slips. The reaction in brief is this, that if fresh guinea pig serum, rabbit serum from a rabbit injected repeatedly with human washed erythrocytes, a solution of lecithin, (the antigen) a suspension of human corpuscles and the serum of the suspected syphilitic patient be mixed in test tubes in certain given proportions, and incubated at body temperature, there is no hemolysis if the patient has syphilis, whereas in a control series without antigen or in a non-syphilitic patient hemolysis takes place.

Though in appearance somewhat complicated the technique is in reality comparatively simple. It is worthy of note that with the progress of the cure the reaction disappears so that when complete it can no longer be obtained; the importance of this reaction in diagnosing an old case, or as a guide to treatment, speaks for itself.

G. G. NASMYTH.

Ophthalmology

D. N. MACLENNAN, W. H. LOWRY.

The Eye and Bright's Disease. *Ophthalmoscope.*

Vignes (Paris) calls attention to the important prognostic difference between the macular star of advanced renal disease and the small patches of exudation, which may be seen on the branch of an arteriole. These may be found in the earliest stages, and life may be prolonged for many years after their discovery. Another symptom often noticed is the inability to maintain accommodation for a long time. This is very suggestive of the presence of albuminuria.

Jessop (London) summarizes the well-known ophthalmoscopic appearances in the various forms of renal disease. Attention is drawn to the fact that retinitis, exhibiting exactly the same signs, is met with without any albumin being found in the urine, and sometimes without any apparent cause. Regarding the prognosis, the writer says, "From my own experience, I should say most of these patients die within one year of the diagnosis of albuminuric retinitis."

W. H. LOWRY.

Post-Diphtheritic Paralysis and the Use of Antitoxin. *Ophthalmoscope.*

Bylsma has observed forty-six cases of post-diphtheritic paralysis of accommodation during ten years, 1898-1907 in children, in none of whom had the diagnosis of diphtheria been made earlier. There had, therefore, been no serum treatment, the cases having been undetected, or the throat affections having been so slight that medical advice was not sought. On the other hand, the author has not had under his observation, during the same period, a single case of paralysis following diphtheria treated by serum. He states that there has been a single case only of post-diphtheritic paralysis during the last five years in the hospital to which diphtheria cases are sent.

W. H. LOWRY.

School Hygiene and Myopia. *Ophthalmoscope.*

An interesting observation, showing the effect of general hygiene upon the eyes, was brought out in Minor's studies in connection with his examination of the pupils' eyes in Memphis. He says: "In my report to the school board, I called attention to the fact that practically the same percentage of myopia was found in all but one of the white schools that I had visited, that in this there was such an increase as to suggest some special cause, and asked if such could be vouchsafed. With some astonishment that the question was made to appear in this guise, I was told that it was the oldest and most out-of-date building in the city, which was overcrowded, badly ventilated and poorly lighted."

W. H. LOWRY.

Rhinology, Laryngology and Otology

GEOFFREY BOYD, GILBERT ROYCE.

Results in Four Hundred Operative Cases of Mastoiditis.

CALHOUN, (F. Phinizy) Atlanta, Ga. *New York Med. Jour.*, February 13, 1909.

The following abstract is from a paper based on four hundred cases of mastoiditis (operative) performed during the year 1905, at the New York Eye and Ear Infirmary.

The writer divides the cases into three groups according to the style of operative procedure called for by acuteness or chronicity, viz., Schwartz, Schwartz-Stacke and Stacke.

Aural trouble of three months duration with mastoid involvement was considered an acute case, and was operated upon after the method of Schwartz. These numbered two hundred and seventy-one cases. They occurred more frequently in mid-winter and early summer, and sudden changes in weather brought an increase. One half the total number were under ten years of age. Regarding the bacteriology, the streptococcus, or some of its family, appeared to be the most malignant; and rapid destruction was characteristic in cases showing it.

The pneumococcus was next in point of number and virulence. Other forms were staphylococcus, influenza bacillus and pyocyanens, concerning which there was nothing of note. The influenza case, however, showed the typical prostration.

Those cases showing streptococcus capsulatus were slow and treacherous, and the writer cites a case which had undergone an apparent resolution, but operation being performed slowly in the presence of the above mentioned germ, the bone was found badly disintegrated, and with large exposure of dura.

On account of this treacherous action, the writer issues the warning that cases presenting streptococcus capsulatus infection should be carefully watched, and should no resolution take place within one month's time an exploratory operation should be made.

The symptoms complained of by the majority of these cases were pain in the ear, the mastoid or its vicinity, discharge, fever, or swelling. Chills, sweats, nausea, vomiting and vertigo were

not uncommon, even in uncomplicated cases. Optic neuritis was present in cases showing small epidural abscesses.

The temperature was an important symptom, and was normal in only twelve cases, the usual range being 99-101 deg. F. In five cases with fever, 103-105 deg. F. Four had sinus thrombosis, one meningitis and brain abscess.

Mastoid swelling was present in 50 per cent., over half of which were infants. Swelling was an early manifestation in these, but a late one in adults.

There were five cases of Bezold's mastoiditis, all in adults with duration from three to five weeks.

Palpation was a valuable sign, but the tenderest part did not always indicate the location of the most destructive process. There were some with no mastoid tenderness. There were four cases of recurrent mastoiditis; all showed that a thorough mastoid operation had not been done previously. Sagging of the posterior superior canal wall occurred in forty per cent., and was considered an operative symptom.

The post-aural swelling in infants frequently subsided after myringotomy and free drainage, and the temperature fell to normal with a seeming improvement in the child. Mastoid involvement, however, was always found on operation, and a case is cited illustrating this.

The method of preparing the patient, and the style of operative procedure is described.

The cortex was discolored in fifty cases, and usually meant a pneumatic bone, or a very destructive process.

There were seventy cases of cortical perforation.

Involvement of the cells at the root of the zygoma was present in twenty-one per cent. of all the cases. The tip was the most frequent site for pus to be found, than where the whole bone was involved. Four perfectly normal mastoids were opened; one was a case of furunculosis, two hysteria or hyperesthesia, the fourth because streptococci were found in the discharge, and a persistent temperature of 100 deg.

The incus was accidentally removed in four cases in ennetting or enlarging the aditus. The external semi-circular canal was opened in two cases with no bad results following.

The sinus was accidentally opened in eighteen cases with no bad results.

Sinus thrombosis arose as a complication eleven times in the 271 cases. Internal jugular excisions were made in all—four deaths occurred.

The average duration of healing was ten weeks.

Where the middle ear and mastoid were both involved the Schwartze-Stacke operation was performed—of these there were eighty-one. The bacteriological examinations were of no value clinically, being mixed infections. Cholesteatomatous crystals were found in 20 per cent.

In some of these cases no mastoid tenderness existed, yet deep extradural abscesses were frequently found beneath a thick sclerotic cortex.

The post-operative treatment consisted in keeping the cavity dry and clean, with tight packing to keep down the granulations. Ten cases were grafted, five primarily, and five secondarily. The average time of healing was four and a half months, and the grafts did not seem to give the results expected.

Facial paralysis occurred seven times—three before and four following operation; one of these recovered in three months time, three of the four in from two to nine months' time.

Hearing tests were made in thirty-eight cases with improvement in one case, stationary in fifteen, and worse in twenty-six, many of these latter due to the tympanum being allowed to fill up with granulations. Of the cases upon which the Stacke operation was done, fifteen were grafted primarily, and five secondarily. Two brain abscesses developed in those where primary grafting was done. The grafting did not seem to shorten appreciably the duration of healing, the shortest period being twenty-three days, and the longest three months. The average time in all cases was seventy days. With regard to the hearing in twenty-eight cases there were one improved, thirteen stationary, and fourteen worse.

GILBERT ROYCE.

Wendell Phillips, New York, in a recent paper in the *Medical Record*, thus states the indications for the radical operation for chronic purulent otitis media. (1) When a permanent cessation of the purulent process has not been effected by prolonged intratympanic treatment, combined if necessary with such minor operations as removal of granulations, enlarging perforation, etc. (2) When the cure has not been effected by the removal of necrosed ossicles and the curettage of the middle ear. (3) When a sudden cessation of the pus discharge produces vertigo, pain, or other unusual symptoms. (5) The appearance of facial paralysis during the course of chronic purulent otitis media. (6) Attacks of vertigo, indicating that the necrotic process involves the labyrinth.

(7) In all cases where intracranial or lateral sinus involvement has already appeared. (8) Where there are positive symptoms of cholesteatoma in the mastoid antrum. (9) Where there are fistulous openings in the cortex of the mastoid process or in the osseous canal wall. (10) Whenever extreme depression or other symptoms of disturbed mentality accompany the disease.

He also states the contra-indications to be (1) When the purulent process is tuberculous and accompanied by advanced general tuberculosis. (2) In advanced pernicious anemia or albuminuria and in cachectic diabetes. (3) It is usually contra-indicated in young children. (4) In all cases where the disease is confined to the ossicles and the tympanic cavity. (5) In adults who have scanty otorrhea without odor, with improper opening of the drum membrane, behind which are retained masses of secretion. (6) In all cases where it is possible to effect a cure by other means.

GILBERT ROYCE.

Gynecology

F. W. MARLOW, W. B. HENDRY.

Thrombosis and Embolism After Operations on the Female Pelvic Organs. *The Lancet*, January 16, 1909

The Hunterian lecture on this subject is by John Bland-Sutton, F.R.C.S., Eng. A few salient points abstracted therefrom are as follows:

1. Clotting of blood results from the action of a hypothetical fibrin ferment on fibrinogen and fibrinoplastin, constituent parts of the blood.

2. The real factors in the production of fibrin ferment remain undetected.

3. Endothelium exercises a great influence in maintaining the fluidity of the blood whilst circulating in the vessels.

4. The integrity of endothelium is often disturbed by disease, but more frequently as the result of injury, including surgical operations.

5. Intravascular clotting of blood and thrombosis is due to the action of pathogenic micro-organisms and the toxins which they brew. Though they may enter through the lymph vessels, the veins are the chief channels by which the blood becomes infected.

6. Transport of clots through the natural gates and alleys of the body is known as embolism.

7. Thrombosis is in reality a defensive action of the blood, as is shown when cancer cells enter the blood stream and thrombosis occurs around them, and the subsequent contraction of the thrombus may destroy them.

8. When a cancerous patient has arrived at that stage of the disease when thrombosis may be expected, the primary tumor is invariably septic. When a large out-runner from a malignant non-ulcerated and non-infected tumor of the kidney fills the renal vein and projects into the vena cava, it does not become coated with coagulated blood.

9. Sepsis is responsible for the formation of thrombi in the great veins after pelvic operations. In some instances the sepsis

is of a mild type, and leads to the formation of thrombi, which are not colonized with bacteria. Examination of such clots may give negative bacteriological results, though there has been evidence in the clinical records of acceleration of pulse, fever and exudation.

10. The simplest form, that of thrombosis of the saphena vein, is due to infection from the abdominal incision through the superficial epigastric vein. The prime factors in producing the changes in the wound which induce thrombosis in this vein are buried sutures, whether silk or catgut.

11. Occurring in the femoral and iliac veins after hysterectomy or ovariectomy, it indicates that the infection is from the vessels about the stump, especially the uterine veins.

12. In septic infection of the uterus, the ovarian veins may become thrombosed. This accounts for the failure of certain surgical measures designed for the relief of acute septic infection of the uterus.

13. Operations for the removal of thrombosed ovarian veins have been devised and performed with some degree of success by Trendelenburg and others.

14. Post-operative thrombosis is usually noticed about the twelfth day.

15. Many examples of post-operative pneumonia, usually attributed to the ether or chloroform, are really caused by minute septic pulmonary emboli.

16. An embolus which will block the pulmonary artery comes as a rule from such large vessels as the superior or inferior vena cava, or from the right auricular cavity.

17. Propagating thrombi are formed in these vessels upon thrombi protruding from smaller tributaries, notably the iliac, ovarian and the azygos system of veins.

18. When a thrombus is formed, it contains the active element for producing more fibrin from the blood with which it comes into contact. This element may be the hypothetical fibrin-ferment, or, with more probability, the micro-organisms, or the toxins produced by them, which caused the primary thrombosis.

19. Pulmonary embolism may occur at any time after operation, as late as the thirtieth day, the average time being the twelfth day. The detachment and transit of the clot are usually preceded by movement, such as sitting up in bed, getting out of bed the first time, but more particularly straining during defecation.

20. Pulmonary embolism is sudden and unexpected. It is

an unusual event in patients with an obvious thrombosis. It produces sudden, urgent dyspnea, great pain in the chest, accompanied by agony and fear of death. The face is blue and covered by cold sweat. Pulmonary physical signs are absent. The patient remains conscious, but suffers severe mental distress. Death may occur in a few minutes, or may be delayed for several hours. Recovery may occur even in very desperate cases.

21. Pulmonary embolism occurs much more frequently after abdominal hysterectomy for fibroids than after any other operation, and is especially liable to happen in women who are profoundly anemic from profuse and prolonged menorrhagia, due to the presence of a submucous fibroid.

22. Operative procedures have been undertaken for the relief of pulmonary embolism [but their value is questionable, even if time permits their employment.—Editor.].

23. The likelihood of post-operative thrombosis and embolism may be best minimized by most careful attention to the details of aseptic technique.

F. W. MARLOW.

The Anatomical Basis for Successful Repair of the Female Pelvic Outlet. HAYNES (Irving S.). *American Journal of Obstetrics*, December 1908.

Haynes gives a carefully prepared and somewhat extensive review of the anatomy of the female pelvis, the functions of its structures, the effect of lacerations and their repair, the object of the latter being the restoration of the damaged tissues to their normal state.

The mechanism of the pelvic outlet he describes under three heads: (1) The pelvic diaphragm, consisting of visceral pelvic fascia, levator ani muscle and anal fascia; (2) the perineal shelf, composed of the two layers of the triangular ligament and the compressor urethrae (vaginae) muscle; (3) the pubo-coccygeal hammock formed by the sphincter ani externus, sphincter vaginae and the transversus perinei muscles.

Of these structures, the important contractile element is the levator ani, and lacerations causing the characteristic symptoms of the condition always involve this muscle. Repair, then, must consist in restoring it to its normal position. This is best done by means of a flap-splitting operation, which he describes as follows:

"The incision is made with scissors along the muco-cutaneous

border of the vaginal orifice, from the anterior margin of the cicatrix on one side to a similar point on the other side. This forms a U-shaped incision.

"With scissors and fingers, the vagina and the rectum are quickly separated from each other, from the perineum to the highest point of the rectocele, and laterally so far outward as to sever all the cicatricial bands and fully expose the margins of the levator ani muscle. Two or three chromic gut or kangaroo sutures are placed in the margins of the levator ani, taking care to pass the needle outward, deeply enough to get a firm hold of the muscle and its fasciae. The number of sutures depends on the width of the gap to be connected; place enough to obliterate the rectocele and properly close the gaping vagina.

"Control hemorrhage, which will be quite free, but as it is mostly venous, pressure and hot sponges are usually sufficient, and tying the sutures in the muscle will arrest what remains. Next place one, two or three sutures of the same material in the lateral surfaces of the wound superficial to the levator muscle. These are placed deeply, and must necessarily without further dissection gather up the sides of the severed perineal body.

"The operation is finished by suturing the U-shaped incision vertically with No. 1 or 2 ten-day chromic gut, a small gap being left posteriorly for drainage."

This operation, as Dr. Haynes says, is not original. It is the same in principle as one which has been performed for years by Dr. J. F. W. Ross, of Toronto. The latter operation, however, has in detail several points of difference which recommend it as superior to the one described. In the first place, the water speculum is used, which keeps the field of operation clear of blood, and obviates the necessity for pressure and hot sponges. Secondly, silk-worm gut is used instead of chromic gut or kangaroo tendon, and is capable of removal, which avoids the possibility of leaving a foreign body, and hence a source of irritation, in the deep structures. It is well known that chromic gut is not always completely absorbed, and may become a source of irritation and infection, and hence defeat the object of the operation. For this reason, removable sutures are better. Thirdly, only two layers of sutures are used, a deep layer and a superficial. In the deep layer the sutures are placed just within the line of the mucocutaneous incision, and pass out widely, to take a large grip on the levator ani. When tied, the ends of the sutures are left long, and the superficial sutures, bringing skin edges and superficial structures together, are placed alternately with those of the deep

layer. The long ends of all deep sutures are then tied loosely together, and the others are similarly treated. No provision is made for drainage, as there is practically no oozing. The urine is drawn off by catheter for a few days, and the sutures are left *in situ* for twelve or fourteen days, when they are easily removed. The operation invariably results in complete restoration of the pelvic floor.

W. B. HENDRY.

Drugs in Gynecology. BOLDT (H. J.). *New York Medical Journal*, February 29, 1909.

Writing concerning drugs in gynecology, the author remarks that no remedy can give benefit unless conjoined with proper hygienic conditions and the necessary remedial treatment of pathological conditions. He acknowledges that medicines internally administered are not likely to have much effect on local conditions, but states that at the same time it very frequently happens that the local conditions of a patient are benefited or cured, though she is not conscious of the improvement.

Recognizing that very many patients have some nervous disturbance in addition to, and not infrequently in consequence of, the local lesion, he has used to advantage in certain cases such drugs as calcium phosphate, apiol, arsenic, hydrastis, gossypium, ergot and aletris, chloride of gold and sodium, veronal, trional and bromural.

Calcium phosphate he has used with benefit in pelvic disorders, accompanied by an extremely nervous condition, with excessive excretion of phosphates in the urine. He recommends small doses of calcium glycerino-phosphate thrice daily after meals. Large doses interfere with digestion.

Cases of painful menstruation, without pathological pelvic condition, he found often benefited by a capsule of apioline three times daily, beginning about a week before the expected flow and continued through the period.

Arsenic he used to advantage with neurasthenic, emaciated patients having uterine displacements, where correction of the displacement of itself failed to give relief.

In prolonged or too profuse menstruation, with or without pain, hydrastis, gossypium, ergot and aletris, he found could be used with success, either singly or combined. In chronic metritis, where the endometrium is not markedly changed, and in some cases of myoma, where operation is declined, these remedies,

especially hydrastis, tended to check the hemorrhage. The fluid extract is the best form of administration, and large doses are recommended. When the combination is used, equal parts are taken, and one-half to one teaspoonful dose given every four hours.

Scanty menstruation, associated with intense ovarian dysmenorrhea, without palpable lesion of the pelvic organs, was relieved by chloride of gold and sodium, combined with extract of *cannabis indica*.

Bromural he places above all the other nerve sedatives. After an extensive use of the drug, during a period of eighteen months he found that it acted more rapidly than other hypnotics and left no after effects, and that there was no danger of forming the drug habit. He considers it of especial value in relieving symptoms peculiar to the menopause, such as irritability, cardiac palpitation, fulness in the head, and other circulatory disturbances of nervous origin.

W. B. HENDRY.

Reviews

Blood-Examination in Surgical Diagnosis. A Practical Study of its Scope and Technique. By IRA S. WILE, M.D. New York: Surgical Publishing Co. 1908. Cloth, \$2.00.

After reference to larger works it is rather astounding to find that so much that is practical in blood examination can be condensed into so small a compass and yet remain clear and sufficiently complete for the practical surgeon or laboratory man. Dr. Wile has managed to summarize the vast hematological literature in this small volume of 160 pages in such a way that it can be readily followed by any medical man without special laboratory training. The subject as related to surgery is covered quite fully; the blood picture is given not only in all uncomplicated cases requiring surgical attention, but frequently in those cases where there may be medical complications or mixed infections. In some instances where there is a question of differential diagnosis the blood pictures are given side by side to facilitate comparison.

The author does not claim that the blood examination is the only basis upon which to make a diagnosis, but he has collected all the practical data upon all diseases requiring surgical interference, and shows that upon the blood examination, when carefully made and interpreted, much valuable information may be obtained, and, combined as it always should be with all the clinical facts may absolutely settle the prognosis or diagnosis. The importance of the blood picture in indicating the presence of pus, whether walled off or not, and in showing the degree of "toxic absorption" and bodily resistance, is clearly set forth.

Besides dealing with the surgical aspects the author takes up the ordinary diseases and infections. The importance of the presence of eosinophiles in leucocytosis due to infections as a sign of good prognosis is shown. For instance, in simple tuberculosis the eosinophiles are not affected; with a secondary infection the eosinophiles are reduced or disappear. Their absence then in tuberculosis is of unfavorable prognosis; their reappearance a sign of improved condition.

This book should be of great aid to the modern surgeon in making an interpretation of a blood picture. To the laboratory man, or hospital interne, who must make the blood examination itself, it should prove invaluable.

G. C. N.

Dominion Medical Monthly

And Ontario Medical Journal

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GEORGE ELLIOTT, MANAGING EDITOR

Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 293 Beverley St., Toronto, Canada

VOL. XXXII.

TORONTO, APRIL, 1909.

No. 4

COMMENT FROM MONTH TO MONTH.

On the Prevention of the Spread of Typhoid Fever.
Recent work on typhoid fever has shown that many patients who recover from an attack may harbor the typhoid bacillus in their intestines or bladder for years. It is to these cases largely that epidemics and sporadic cases may be traced, and if we are to stamp typhoid fever out, it is necessary that our immediate attention should be given to these typhoid carriers. By far the most work has been done on these cases in Germany, where to-day they have less typhoid fever than most other countries. The theory of spontaneous generation of disease has long been discarded, and we now know that when water or milk are accountable for epidemics of typhoid fever, it is by contamination with material containing typhoid bacilli. For a water or milk supply to become contaminated, it is only necessary for one of these carriers to deposit excreta in a suitable place, or to handle foodstuffs which are used in an uncooked condition, and directly contaminate them, through carelessness in washing their hands, etc. A case was reported during the past year, where a servant was proved to have been a carrier for forty years. During this

time she had worked for different families, and in nearly every family one or more cases of typhoid fever developed during her service.

In the year 1907 there were four times as many cases of typhoid fever in the United States as there were in Germany. It is fair to assume that typhoid fever is as prevalent in Canada as in the United States. It has been estimated that it cost the United States for that year \$140,000,000 for typhoid fever. In this estimate is included fees for medical attendance and nursing, the sum of the earning capacity of those who were sick, and the amount of money which the 15 to 20 per cent. who died would have earned, had they lived to an average life. If we have in Canada one-twelfth the population that they have in the United States, then it cost us the same year between \$11,000,000 and \$12,000,000 for typhoid fever. In Germany they have a larger population, and the country is more thickly settled than in either Canada or the United States. It cost them a little more than three times what it cost Canada. How, then, have the Germans been able to reduce the number of typhoid fever cases, and thus save hundreds of lives and millions of dollars?

This has been done, firstly, by the accurate and early diagnosis of the disease, which is only possible by blood cultures, Widal reactions, and the bacteriological examinations of the excreta. A large number of cases throughout Canada to-day, especially in the rural districts, are treated for typhoid fever, which have some other continued fever, and a still larger number of mild cases of typhoid fever are never diagnosed. This undoubtedly is true to a lesser degree in Germany, but the German Government has provided, and support, numerous typhoid stations, which are distributed throughout the country, and to which a general practitioner may appeal for help, in the diagnosis of these cases. Secondly, where possible, typhoid fever is treated in hospitals especially constructed for it, or in wards of a general hospital which are set aside for typhoid patients alone. These are extremely valuable, as the cases are under the supervision of physicians and trained assistants, who are able to give the patients the best treatment, and, in addition, protect the masses of people from infection through carelessness of the attendants in the handling of the excreta. It has been shown that 3.3 per cent. of typhoid is contracted by hospital infection of attendants, or of other patients while in wards where typhoid cases are treated. Since the isolation of typhoid cases in wards by themselves in Germany, this percentage has markedly decreased. Thirdly, the

German Government require three negative examinations of the excreta of typhoid patients during convalescence before they are permitted to be discharged. If, at the end of ten weeks, the patients still harbor the bacilli, they are turned over to one of the many typhoid stations, where they are instructed regarding the disinfection of their excreta. They are then allowed on parole, having been given suitable intestinal antiseptics, and are required to report from time to time for examination. In many of these cases the bacilli disappear in a few weeks; in some they persist for years, and these cases are followed by the various stations.

In a series of sixty-five cases of typhoid fever examined at the Boston City Hospital previous to their discharge, 23 per cent. were shown to have typhoid bacilli in their excreta. These cases were permitted, as they are throughout Canada, to go forth and disseminate the disease. The German Government spend annually several million dollars in preventing the spread, and in attempting to eradicate this disease. They have shown that it is possible to reduce the number of cases in a few years by the expenditure of a relatively small amount of money compared to that which it costs the Canadian people every year for typhoid fever.

O. R. MABEE.

The Calmette Reaction. Our experience with this test has reached 82 cases, and it may be of interest to speak of our results. Among this number, of whom several were children, fifty-two gave a positive and thirty gave a negative reaction. The positive results included cases of tubercular meningitis, tubercular joints and osteitis, adenitis, choroiditis, and pleurisy. The negative results included two cases of suspected tubercular adenitis, in one of which the bacillus was found in the removed gland; one case of suspected tubercular disease of the tarsal bones, another of the metatarsal bones, and still another case giving clinical evidence of a tubercular knee. These latter cases were the only ones in which the results were inconsistent with those obtained by other clinical means.

The reaction usually disappeared within twenty-four or thirty-six hours, though two lasted a week, and another persisted for six weeks. We had one case in which a deleterious effect followed the use of the test. The test was used in an eye recovering from keratitis in a patient with a tubercular history, and with large tubercular glands in the neck. The keratitis recurred, and with it a large ulcer, which upon healing left a large leucoma.

Our experience has taught us that a large proportion of the patients suffering from tubercular disease give a positive, but that a small percentage do not. We have also been impressed that the test should never be applied to an eye undergoing visible pathological change; and that only a very reliable preparation of the solution be used, as we have found some which have been useless.

W. H. LOWRY.

The College of Physicians and Surgeons of Ontario is the incorporated name and style of the medical profession of this Province. From time to time some one of its members or the impetuous editor of a public medium feels called upon to administer a corrective to the Council, the business body of the College, either for its errors of omission or commission. As a rule these eruptions do little harm, and certainly not much good. In a short time the dust has blown away, and the Council pursues the even tenor of its ways. There are, however, several items in the constitution of the College of Physicians and Surgeons which may well be dispassionately discussed, and anything we may say in this connection is not to be misconstrued into an attack upon any member of that body as it is now constituted, but rather as a protest against the antiquated conditions which prevail. As members of that body, we are all vitally interested in its welfare. We are the people; the Council is our parliament.

First, as to representation. There seems to be no valid reason why universities which have surrendered to others their degree-conferring powers, and medical colleges *non est inventus*, should continue to have representation on the Council. It savors too much of the Close or Pocket borough system of representation, or the Rotten borough at the time of the Reform Bill of 1832. It is no credit to the College, and a doubtful honor to the representatives of these, to perpetuate this very mischievous system. Nor does it appear to us to be just representation, for a university or teaching medical faculty, or a defunct institution, to nominate a representative, and for the members thereof to have a second vote for a territorial representative.

As is well-known, there are five representatives of the homeopathic body on the Council, and there are said to be about thirty homeopaths in the Province of Ontario. Now, in the past fifteen years we think we are correct in stating this—there has scarcely been more than two or three homeopaths establish in practice in Toronto, and Toronto has at least one-quarter of the medical

population of Ontario. In the entire Province there have been scarcely more than three or four. At least one of the older ones has become a practitioner of the regular school. In process of time, therefore, and that at no very distant date, we may expect to see a constituency of five elect a representation of five to the Council. Then there will be a condition of Rotten borough with a vengeance.

There is a growing feeling that an election to the Council every four years, in these strenuous days, is not sufficient, that there should be annual or at least biennial elections. The latter undoubtedly seems wanted. Whilst some members may be disinterested, there would assuredly be an awakened interest among the great majority of the members, and a better and fresher standpoint from which to judge and pass upon the utility of the Councillors to the College.

When we become a licentiate of the College of Physicians and Surgeons of Ontario we are told we have the right to tack on to our names M.C.P.S.O.; but whilst L.R.C.P. (Lond.), *et al*, in their liquid euphony, are held to be dignified and honorable, our own rather cumbersome, mouth-filling M.C.P.S.O., is more often than not treated as a joke, although the former are not a whit better than the latter—licenses to practice. As M.C.P.S.O. is quite as good as these, there are, however, two superior qualifications to be secured in England, namely, the M.R.C.P. (Lond.), and the F.R.C.S. (Eng.). Would it not be well for our Council to take an advanced step in the direction of establishing here opportunities to secure qualifications which would be on a par with the M.R.C.P. and F.R.C.S. above referred to?

Bee Stings in Rheumatism are receiving popular attention in the lay as in the professional press. Rheumatism is a large mantle which sometimes covers a multitude of diagnostic sins. The cause of this therapeutic revival has been the publication of an article in the *British Medical Journal* by Dr. Ainley Walker, from whose pen the treatment receives rather strong endorsement. This article so impressed itself upon the mind of Dr. E. T. Burton, Birmingham, England, who had suffered from an acute arthritis of the hip joint, followed by a sciatica of the same side, that, having applied the remedy to himself in different seasons from June to the middle of October in 1908, with pronounced success and permanent relief, he promptly used it upon his patients. He had been a rheumatic sufferer for twenty-five years. In the March, 1909, issue of the above-mentioned journal

he gives the results of the treatment. In his own case he had suffered himself to be stung with bees 271 times, a rather manifold number of applications; still, as one writer remarks, it would probably but be "poetic justice," if from the insecta, which are now considered to do a great deal of harm, there should emanate another efficient therapeutic remedy. The honey bee, being a most valuable member of the insect world, may be the means of offsetting to a certain extent to mankind the evil influence of the others.

The untoward results from diphtheria antitoxin, especially in asthmatic patients, has rather upset the opinions of a few years ago, that the administration of antitoxin was safe in any condition, even in doses up to 20,000 units. That diphtheria antitoxin is not altogether a perfectly harmless remedy is seen in the fact that at least there have been twenty-eight recorded cases in which either collapse or death has almost immediately followed upon its administration. In these cases, within a few minutes after the injection, the patient has been seized with intense dyspnea, edema and urticaria. Where recovery has followed, it has been slow. It, therefore, has possible dangers where there is any form of respiratory distress, as in asthma or any asthmatic condition, hay-fever, acute or chronic bronchitis, or in neurasthenia. In the twenty-eight cases referred to, ranging in age from 13 months to 54 years, most being in adults, there were noted fifteen deaths and thirteen cases of collapse, several giving a previous history of asthma. It is said to be possible that the urticaria and edema, affecting the mouth and pharynx, descends to the smaller bronchi, the resulting exudate mechanically blocking the air-cells.

The Projector in Surgery, if successful, will do away entirely with the rows upon rows of seats in our hospital theatres. At the present time, all a student gains from viewing an operation from these heights is of very little value, so that any device or arrangement which will improve upon present methods of observation will be sure to be heartily welcomed. Dr. Charles H. Duncan, of St. Gregory's Hospital, New York City, has recently devised an apparatus, whereby a bird's-eye view of the operation may be thrown upon a screen, in full view of all members in the class-room, which adjoins the operating-room. The students are not in the operating-room at all. This projection shows the operation life size or larger, if desired, and whilst the operation is

proceeding a lecturer explains the procedure and technique, step by step. About eighteen inches over the heads of the operators is a large disk, bordered with electric lights at its periphery. In the centre is a large opening, over which is an inclined mirror. This reflects the patient, operator, assistants, nurses, etc., on to a second mirror, vertically placed, which in turn reflects the light into a lens. This focuses the operation, in fact the entire scene, upon the screen in the adjoining class-room. Through the small opening in the sound-proof wall there is a small screen. The images are said to be perfectly distinct, and the students can see every movement of the surgeon. It is particularly valuable for taking photographs. It provides also for moving picture records of important operations. In this way the technique of eminent surgeons may be graphically preserved.

THE programme of the meeting of the Canadian Hospital Association, April 12th and 13th, to be held in the Parliament Buildings: Monday, April 12th, 10 a.m.—Meeting called to order; Invocation, Rev. J. McP. Scott; Minutes; Announcements; Unfinished business; Committee reports; New business; President's address, Dr. W. J. Dobbie, Toronto Hospital for Consumptives, Weston; "Contagious Diseases and their Management," Miss K. Mathison, Isolation Hospital, Toronto; adjournment for lunch; 2 p.m.—"The Ideal Small Hospital," Dr. R. B. Smith, Provincial Inspector of Hospitals; "Surgical Tuberculosis," Dr. E. M. von Eberts, Montreal; 3 p.m., Visit to Weston Sanitarium; 6.30 p.m., Dinner at Parliament Buildings; 8.30 p.m., Address, Mr. J. P. Downey, M.P.P. Tuesday, April 13th, 10 a.m.: "The Care of Convalescent Patients After Leaving the Hospital," Miss Louise A. Brent, Hospital for Sick Children; "Some Points in the Architecture of Small Hospitals," Edw. F. Stevens, Esq., hospital architect, Boston, Mass.; "The Inadvisability of Training a Nurse for Her First Year in a Small Hospital, with the Idea of Having Her Complete Her Course in a Large Hospital," Miss N. M. Miller, Ross Memorial Hospital, Lindsay; 2 p.m.—Report of Nominating Committee; "Neuropathic Wards in a General Hospital," Dr. D. C. Meyers, Deer Park; "To What Extent Does the Small Hospital Fit Its Graduates for Institution Work?" Miss N. Morton, Collingwood; "What a Woman's Aid Society Can Do," Miss A. I. Robinson, Galt Hospital, Galt; "The Evolution of Surgical Technique during the Last Half Century," Dr. H. A. Boyce, General Hospital, Kingston. J. N. E. Brown, Secretary Toronto General Hospital.

News Items

DR. A. T. SHILLINGTON, Ottawa, spent the Easter holidays in New York.

DR. PARKER, of Milverton, has taken as a partner Dr. Tye, of Goderich.

DR. R. Y. PARRY has been appointed an associate coroner for Wentworth County.

THE Ontario Government has refused to appoint a Royal Commission on Tuberculosis.

ONE thousand unvaccinated children are being debarred attending the schools in Halifax.

TORONTO has notices attached to telephone poles saying it is unlawful to spit on the sidewalks.

A MILK COMMISSION, composed of a prominent producer, milkman and physician, will be appointed to inquire into the clean milk question in Ontario.

DR. SUTTON, of Maynooth, succeeds Dr. Wilson in his medical practice at Norwood, Ont.

DR. A. L. W. WEBB, Wooler, we learn, has sold his medical and surgical practice to Dr. J. Stewart Anderson.

DR. E. C. WILFORD, Blyth, Ont., has accepted a position on the staff of Dr. Primrose, of the Toronto General Hospital.

SCIENCE graduates of McGill University, after a lapse of thirty years, are to have a reunion on the 27th of April in Montreal.

HOTEL DIER HOSPITAL, Montreal, which will be 250 years old in July, is to be remodelled and extensive alterations and additions made.

DR. A. C. SMITH, for many years Superintendent of the Lazaretto at Tracadie, N.B., died on the 23rd of March, aged 68 years.

DR. ERNEST JONES (late of London, England) begs to inform the profession that he has established himself at 407 Brunswick Avenue, Toronto, and that he confines his practice exclusively to nervous diseases.

DR. CHARLES MOXLEY, North Bay, Ont., died on the 20th of March at the Royal Victoria Hospital, Montreal. Deceased was 30 years of age.

DR. P. D. GOLDSMITH, formerly of Peterboro' and Belleville, and father of Dr. Perry G. Goldsmith, Toronto, died suddenly on a visit to Belleville.

DR. JOHN JOSEPH SHEAHAN, of Chapleau, in the District of Sudbury, has been appointed an associate coroner for the said District of Sudbury.

DR. W. E. BURGAR, Welland, Ont., died on the 14th of March. He was a graduate of Queen's University in 1868 and had always practised in the county of Welland.

THE Dominion Proprietary Medicines Act came into force on the 1st of April. It is now an offence against the law to distribute samples of medicines from door to door.

TORONTO hospitals, which were voted \$50,000 each last January, will not accept the money if outside physicians are to be allowed to follow their patients into the wards.

ST. CATHARINES, Ont., will have a hospital for tuberculosis cases in the immediate future. A site of seven acres along the old Welland Canal has been secured for the purpose.

DR. W. J. PRESTON announces to the people of Creemore and surrounding country that he has bought the practice of Dr. G. H. Dunn, and will open the office the 1st of May.

DR. S. H. GLASGOW, Welland, Ont., President of the Ontario Medical Council, died on the 14th of March from diabetes. He was graduated from the Toronto School of Medicine in 1878.

THE Woman's Anti-Tuberculosis Society has been organized in Halifax with a membership of 500. Dr. John MacCrae, Montreal, was present at the organization meeting and delivered an address on the subject of tuberculosis.

BRANTFORD, Ontario, is to have a hospital for tuberculosis cases. Mr. E. L. Cockshutt has donated a suitable site, the Ontario Government \$4,000, and the balance of \$14,000, which the hospital will cost, will be raised by local subscription.

MR. HAROLD CLARKE, son of Dr. Clarke, of the Toronto Hospital for the Insane, and Mr. Roy Thomas, assistant to Dr. N. A. Powell, Toronto, final year men at Toronto University, Medical Department, have secured appointments at the Charity Hospital, Blackwell's Island, New York.

Dr. W. T. GRENFELL, of the Labrador Mission to deep sea fisherfolk, has been in Winnipeg, and will be in Toronto the middle of April.

LECTURE and laboratory courses in tropical medicine, public health and sanitation, including school and factory inspection, have been inaugurated at the New York Post-Graduate Medical School and Hospital, and will be given with the co-operation of the U. S. Army and U. S. Navy Medical Corps.

CANADIAN MEDICAL ASSOCIATION.—For the forty-second annual meeting of the Canadian Medical Association in Winnipeg on the 23rd, 24th and 25th of August, 1909, transportation arrangements have been completed. For delegates, their wives and daughters (no others), from points east of Port Arthur the rate will be single fare plus twenty-five cents, for round trip tickets, provided fifty or more are present holding Standard Convention Certificates. These tickets will be on sale from August 14th to 21st, final return limit from Winnipeg Sept. 25th. If Ontario Lake route is used payment of the following arbitraries must be paid to the pursers of the Richelieu lines: During August, Toronto to Montreal, \$8.00; from Kingston to Montreal, \$4.50. During September, from Toronto to Montreal, \$6.65; from Kingston to Montreal, \$3.50. Upper Lakes: going \$3.50 additional; returning \$8.50 additional. Side trips from Winnipeg, one fare for the round trip, Aug. 25th to Sept. 24th, inclusive. Alaska-Yukon-Pacific rates will apply for side trips to Pacific Coast points. Side trips to interior points in B.C. will be announced in the annual circular issued in June or July 1st. Local Convention plan arrangements will prevail for the West as far west as Laggan and Coleman, Alberta. Lowest one-way first-class fare from B.C., date of sale of tickets being August 16th to 19th, inclusive, with final return limit Sept. 25th.

PROVISIONAL programme for the annual meeting of the Ontario Medical Association: Tuesday, June 1st, 1909. Morning Session, Medical Section.—10 a.m.—Paper, A. Sangster, Stonffville: "Graves's Disease," H. B. Anderson, Toronto; paper, E. Ryan, Kingston; "Differential Diagnosis of Cerebellar Tumors," Ernest Jones, Toronto; "A Case of Opium Poisoning," A. Taylor, Goderich; paper, R. J. Dwyer, Toronto. Surgical section: 10 a.m.—"Hodgkin's Disease," W. J. O. Malloch, Toronto; "Surgical Treatment of Gall Stones," C. F. Moore, Toronto; paper, J. W. S. McCullough, Alliston; "A Case of Appendicitis," Everett Hicks, Port Dover. Section of Preventive Medicine: 10 a.m.—Paper, J. C. Connell, Kingston; paper, W. R. Hall,

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Chatham. General Session: 2.30 p.m.—President's address: "Acute Septic Peritonitis," J. B. Deaver, Philadelphia; "Ultimate end of Surgery, with special reference to the Surgery of the Pelvic Organs in Women," W. P. Manton, Detroit. Tuesday evening: 8.30 p.m.—Paper, L. Emmett Holt, New York; paper, J. Adler, New York. Wednesday, June 2nd, 1909: Morning session, Medical section: 9.30 a.m.—Symposium, "Present Day Therapeutics," J. T. Fotheringham, Toronto; "Nostrum Evil," J. Ferguson, Toronto; paper, J. H. Elliott, Toronto; "Bier's Hyperemic Treatment," S. H. Westman, Toronto; "Recent Advances in X-ray and Radium Therapeutics"; "Therapeutics of Digitalis," V. E. Henderson, Toronto; paper, W. B. Thistle, Toronto. Surgical section: 9.30 a.m.—Paper, C. B. Shuttleworth, Toronto; "Repair of 3 cm. Defect of the Median Nerve, due to Old Injury. Almost Complete Restoration of Function," Ingersoll Olmsted, Hamilton; paper, J. S. Wardlaw, Galt; paper, R. R. Wallace, Hamilton; "Diagnosis of Genito-urinary Diseases of Women," Ellice Macdonald, New York. Section on Diseases of the Eye, Ear, Throat and Nose: 9 a.m.—Exhibition of cases. Exhibition of specimens, instruments, etc. Demonstration of new methods. "Influence of Light Rays on the Retina," J. M. MacCallum, Toronto; paper, W. F. Chappell, New York; "Bronchoscopy, etc.," D. J. G. Wishart, Toronto. Wednesday afternoon, General session: 2.30 p.m.—"Copious Water Drinking in the Treatment of Typhoid Fever," E. F. Cushing, Cleveland. Thursday, June 3rd, 1909: Morning session, Medical section: 9.30 a.m.—Paper, A. Fisher, Stratford; paper, J. A. Bauer, Hamilton; "Gastrogenous Diarrheas," Graham Chambers, Toronto; "Landry's Paralysis," R. G. Kelly, Watford; "Results in Vaccine Treatment of Certain Bacterial Diseases," G. W. Ross, Toronto. Surgical section: 9.30 a.m.—"Movable Kidney," W. McKeown, Toronto; "Intussusception," J. M. Elder, Montreal; paper, J. M. Rogers, Ingersoll; paper, Hadley Williams, London. Section of Gynecology, Obstetrics and Diseases of Children, June 1st, 2nd, and 3rd: 9 a.m.—"Vomiting of Pregnancy," J. M. Slemmon, Baltimore; "The Use of Hyoscine and Morphine in Obstetrical Work," C. H. Vrooman, Winnipeg; Case in Practice, W. Spankie, Wolf Island; paper, H. E. Haight, Buffalo; paper, F. A. L. Lockhart, Montreal; "Toxemia of Pregnancy," H. M. Little, Montreal; paper, A. E. McColl, Belleville; paper, K. C. McIlwraith, Toronto; paper, F. Fenton, Toronto; paper, Allan Baines, Toronto. Symposium on "Slight Contraction of the Pelvis in Pregnancy and Labor."

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXII.

TORONTO, MAY, 1900.

No. 5.

Original Articles

SOME EXPERIENCES WITH INTRA-SPINAL ANALGESIA.*

By HERBERT A. BRUCE, M.D., F.R.C.S., Eng.

Associate Professor of Clinical Surgery, University of Toronto; Surgeon to the General Hospital, Toronto.

Mr. President and Gentlemen.—The comparatively new method of producing anesthesia by the intra-spinal injection of various drugs has given such striking results as to merit an investigation. I wish at the outset to make it clear that it is not my intention either to advocate or disparage this new method, but to put before you some personal experiences, and the opinions and results of some of those who have given the method a considerable trial. That we have in intra-spinal anesthesia an apparently safe procedure which will be of value in cases of cardiac and pulmonary disease, in which a general anesthetic is contra-indicated, seems likely. During my visit to Europe last year, I made an effort to see all that I could, in the various clinics in Berlin, Vienna, Berne, Paris, London and Leeds, of spinal anesthesia, so that I might have some personal knowledge of the results obtained and opinions held in these places. In Berlin I saw Bier use it a number of times. He used stovaine, and in the cases that I saw it was quite satisfactory. I made inquiries as to whether they had had any fatal or bad results from its use. They had had some temporary difficulties, such as headache, weakness, paralysis of ocular muscles, etc., but stated that they had had no fatal result.

It is a very difficult matter to get an absolutely reliable statement in regard to it, for the enthusiastic are apt to underestimate

*Presented at Canadian Medical Association, Ottawa, June, 1908.

the dangers and difficulties, and only report their successes, while those who are prejudiced against it often condemn without a reasonable trial. Personally, I have tried to approach it with an open mind, and intend giving it a fair trial, but am not yet satisfied as to its uses and limitations. That it is of value in properly selected cases I have no doubt, but I do not think it has yet reached a position that will entitle it to be classed with ether as a reliable anesthetic.

Leonard Corning, of New York, in 1885, discovered the effect of cocaine on the peripheral nerves since employed in regional analgesia. It is just a decade since Bier, in August, 1898, produced anesthesia by the injection of cocaine into the lumbar sac. A week later he had it used on himself that he might observe its effect. The after-effects, particularly headache, were so unpleasant that cocaine was given up. Four years ago stovaine was discovered by Forneau, and since then many thousands of cases have been injected with it with very satisfactory results. At various times eucaine, magnesium sulphate, novocaine, tropococaine and stovaine have been used, and now, by the majority of surgeons, stovaine is considered to be the most satisfactory drug. Bier states that no deaths can be attributed directly to its use. The dosage of stovaine is two to five cc. It can be sterilized in solution.

In the first eight cases stovaine as prepared for Bier was used, and in the remaining cases, stovaine as prepared for Barker, by Billon, of Paris.

Barker's solution contains:—stovaine, 10 per cent., glucose, 5 per cent., distilled water, 80 per cent. Its specific gravity is 1.0230, while that of the cerebro-spinal fluid is 1.0070.

Bier's solution contains:—Stovaine, 4 per cent., sodium chloride, .11 per cent., epirenin borate, 0.01 per cent.

Barker thinks gravity plays an important part on the drug injected into the dural sac, and the limitation as far as possible to particular areas of the spinal canal. He thinks there is good ground for believing that the unpleasant sequelae, vomiting and headache, are prevented or mitigated by the exclusion of the drug as far or as long as possible from the cranial cavity. Donitz, who may be supposed to express the views of the Bonn Klinik, says: "Even where the injection has been correctly given, there are a number of factors which influence the extension upwards of the analgesia. These are, first, the change of the patient afterward; second, the condition of the blood pressure within the skull; and, third, the amount of the solvent used with the anesthetic agent."

He says that the analgesic compound injected is carried with

the cerebro-spinal fluid, and that the extension of the analgesia upwards or downwards is determined by its movements. Barker traverses these conclusions. He uses an analgesic compound of high specific gravity. Professor Krönig, of Freiburg, speaks of the principle of making use of gravity acting on a heavy injection compound.

I am using either a Barker's or a Bier's syringe. Barker's is made of steel, nickled over, and can be boiled any number of times without change. The needle should be as sharp as possible, as a blunt needle may push the dural sac before it without entering it, and thus cause failure. For perineal operations the injection is given with the patient in the sitting posture. In other cases, the patient is placed on the side, with the knees well drawn up on the abdomen, so as to round the back well. The pelvis is slightly raised by placing a blanket folded four times under the hips, which slightly increases the lateral curve of the spine. When the patient is turned over on his back for operation this blanket is still left in place. The head and neck are kept raised at all times, so that the dural canal shall be above the level of the dorsal depression. The back is carefully prepared by scrubbing with ethereal soap and then with alcohol, and no dressing is necessary afterwards.

To reach the dural sac precisely in the middle line, requires some experience and a little skill. It is best done by placing the index finger on the spinous process above which the injection is to be made. It is well to avoid change of position after the injection, except the gentle turning over on the back, and when the patient is taken from the operating table to his bed the head and shoulders must still be well raised. From 5 to 10 cc. of cerebro-spinal fluid should be allowed to run through the needle before injecting the drug. Stovaine is prepared by Billon in glass ampoules, each of which contains 5 cc. of stovaine to 1 cc. of the solution. This is the amount I have used in my cases. Barker thinks the use of adrenalin with cocaine is a mistake, and advises against it. Special care should be taken to secure a free flow of cerebro-spinal fluid, as this is an indication that the needle has freely entered the sub-dural space. I think undoubtedly, spinal analgesia has a useful place in surgery, but that it will ever largely, or entirely, replace a general anæsthetic is very unlikely.

The time elapsing from the moment of injection to analgesia varies from four to fifteen minutes, and is usually about eight minutes. The usual course of events is:—First, formication in the feet, then abolition of the cremasteric and knee reflexes, followed by loss of sensation, usually first in the perineum, then in

the legs, groins and abdomen. Motion is usually lost. The height on the abdomen to which the loss of sensation rose, varied according to the measures adopted, and to some extent, to the amount of the drug injected. As a rule, with an injection of 5 cc., and with moderate elevation of the pelvis, the analgesia rose to the umbilicus, and occasionally to the episternal notch. The duration of analgesia varied between 30 minutes and 2½ hours. The average appears to be 70 minutes. For easy reference and comparison I have tabulated the cases, but I should like to refer to some of them in which there was some special point of interest.

Case II: Mrs. G., Age 63. She had been operated upon a year ago for intestinal obstruction, due to extensive adhesions. Three weeks ago she was taken ill with acute obstruction, with fecal vomiting, and it was thought that she would not recover. However, she succeeded in getting a small movement, and relief from some of the symptoms, and is now in a very weak state, and unfit for a general anesthetic. Analgesia was complete in four minutes, and extended to one inch above the umbilicus. On opening the abdomen I found very extensive adhesions, and had to manipulate the intestines a great deal. There was perfect relaxation of the abdominal muscles, and anesthesia was in every way most satisfactory. The patient was quite unconscious of anything being done, and chatted pleasantly to those about her. She left the hospital in three weeks' time, without having had any ill effects.

Case VI: Mr. H., Age 65. This patient was a very fat man, weighing about 250 lbs., with albuminuria and retention of urine, from an impenetrable stricture of the urethra. The bladder was up to the umbilicus, and a number of unsuccessful attempts had been made to pass the catheter, which only resulted in making two false passages. I decided that an external urethrotomy should be done, and as the patient had a weak heart and was a bad subject for general anesthesia, used spinal analgesia. Anesthesia was complete in two minutes, extending to the umbilicus. The operation lasted one hour, as I had difficulty owing to the lacerations of the urethra in front of the stricture. He was most comfortable during the operation, and afterwards expressed himself as being not only delighted, but enthusiastic with the result of the analgesia. He did well for two weeks, then delirium set in, followed by mania. This lasted for six weeks, with gradual recovery, and he is now quite well—eight weeks after.

Case VII: Mr. T., Age 65. Inoperable cancer of rectum. He had a weak pulse, and his general condition was very poor. Anesthesia was complete in four minutes, and I was able to do a

left iliac colostomy with every degree of comfort, the patient talking to me while it was going on, and expressing himself as much pleased with the anesthesia. Two weeks after the operation he became delirious, and very difficult to manage. This only lasted for a week, when he quite recovered from it.

Case XIII: Mr. C., Age 73. Perineal Prostatectomy. This patient had a very large, hard prostate, as large as a good-sized fist, which was almost completely obstructing the rectum, as well as interfering with the bladder. He had a very weak, intermittent pulse, and we were afraid to give a general anesthetic. Anesthesia was complete in fifteen minutes. Operation lasted thirty-five minutes, and anesthesia during this time was very satisfactory. After a week he became delirious, and we had difficulty in keeping him in bed. This condition has improved greatly during the past week, and when I saw him yesterday he was almost himself again.

Case XIV: Mrs. H., Age 58. Nephrectomy. In this case there was a large tumor extending down to below the brim of the pelvis, and up toward the right loin. The doctor who had attended her for months sent her in as a case of ovarian cyst. As she had no urinary symptoms, and as I had been able to make only a very brief examination, I decided to open the abdomen above the pubis, although my opinion was that the condition was one of hydronephrosis. Spinal analgesia was used, although there was nothing to contra-indicate the use of a general anesthetic. Anesthesia extended only to an inch and a half below the umbilicus. I was able to make the exploratory incision comfortably, but when examining the organs above the umbilicus the patient complained of pain. As it was quite clearly a case of hydronephrosis, I decided to remove the kidney, from the right loin. Anesthesia not being high enough to permit of this, a general anesthetic was given to finish the operation. She made a good recovery.

Case XV: Miss L. Excision of knee. This was a pale, anemic girl, with bony ankylosis of the knee-joint at right angles, probably the result of tubercular disease. I thought this a suitable case for spinal anesthesia, and it was accordingly used. The injection was made with the patient on her left side, so that the affected leg would be most dependent. Anesthesia was complete in two minutes, and the operation was proceeded with. Anesthesia was quite perfect throughout, and there were no distressing symptoms at the time or after. During the operation the patient chatted with those about her, and was much pleased with the anesthetic.

Cinaglia reviews the various mishaps that have been published in connection with spinal anesthesia, and reports two cases in which it was followed by intense headache and cramps, persisting for ten days in one case. Severe pains resembling sciatica were noted in another patient, which have persisted for several months with brief intermissions. Another patient had paralysis of the bladder and rectum for several months after the operation, with pains in back, abdomen and legs. The symptoms have gradually subsided, and a complete cure is anticipated soon. He remarks in conclusion that spinal anesthesia is superior to all other technics, although it is still far from ideal. He advises its use only in cases in which it is absolutely necessary, with correct technic and dosage, thus avoiding accumulation of statistics, which throw discredit on a method which gives fine results under proper conditions, and which may prove the best of all when further perfected.

Feliziana, of Rome, reports experiences with spinal anesthesia in 203 cases. The temperature rose in sixty per cent. of the cases, almost always accompanied by headache, the latter in a few cases persisting very severe for ten days. In thirty per cent. of the cases there was intense pain in the spine, generally vanishing in a few days, but in one case lasting for five days, and requiring morphine. Another patient had in addition severe neuralgia in the legs, continuing for ten days. In four or five cases the motor relaxation did not subside as usual, but persisted for several days. Paresis of the bladder and rectum was observed in forty per cent. of the cases, generally vanishing by the fourth or fifth day, but in a number of patients the ischuria persisted for ten days or longer, and the bowels were sluggish. In one patient the paralysis of the bladder persisted, and cystitis developed during the repeated catheterizations, and four months had elapsed before the bladder and rectal functions had returned to normal under vigorous measures in the hospital. One patient, a young man, presented paroxysmal hematuria after spinal anesthesia for a herniotomy. The patient's general health did not suffer, and the hematuria did not recur after the second week. During the course of the spinal anesthesia, pallor, anguish, small pulse, and retching were observed in several cases, but transient in all. Ten patients were delirious, in one case amounting to hypochondriac delirium with ideas of persecution. One robust man of forty had transient collapse with brief convulsions. Paralysis of the respiratory muscles was observed in one elderly man, with pallor and vomiting soon after the puncture. Active artificial respiration with inhalation of oxygen and injections of ether and strychnine restored him. Feliziana injected 1 cc. of ten per cent. solution of stovaine

and sodium chloride—equal parts of each—with a little lactic acid, the whole mixed with the patient's own cerebrospinal fluid.

Von Rosthorn reports that he has used stovaine 107 times in the Heidelberg Frauenklinik, with no deaths. He has failed to produce anesthesia in thirteen per cent. of his cases. He gives scopolamine and morphine with it. Has had no muscular paralysis following its use, but post-operative headache in thirty-four per cent. of the cases. He considers youth and old age contra-indications for its use. Professor Israel reports ninety-one cases without mortality. He uses Billon's preparation, and places the patient in the Trendelenburg position. Failed in three cases to produce anesthesia. Has had no heart or respiratory complications, but post-operative headache in some cases. Three cases have had temporary involvement of the sixth nerve.

Moynihan, of Leeds, reports fourteen cases with no deaths. In one or two cases he failed to produce anesthesia. Most of his cases have been bladder or prostatic operations. The respiration was affected in one case in which anesthesia extended to xiphoid sterni. No headaches, nausea, or other complications following its use.

Professor Doderlein, of Tübingen, had forty-four cases up to January 7, 1907, with no deaths, and failure to produce anesthesia in five cases. The circulation and respiration were affected in three. These were women over forty-eight years of age, and may possibly have been due to the Trendelenburg position. In two cases there was muscular paralysis of the arm and neck, lasting ten days. Professor Tuffier, of Paris, has had 530 cases, with no mortality. There were three cases in which it was necessary to give a second injection. He thinks there is usually a little more hemorrhage than when a general anesthetic is used. He has operated upon the stomach and liver, but advises against it, on account of the delicacy and uncertainty of this method. His cases have rarely had headache afterwards, has had no muscular paralysis, or post-operative rise of temperature, or involvement of heart, liver or kidneys.

Dr. Kummell, Hamburg, reports 186 cases, with no deaths. Failure to produce anesthesia in one-sixth of his cases. Has operated on patients from five to eighty years of age. Twenty per cent. of the cases show some nausea during operation. There is no cardiac involvement, and the respiration is affected only in the Trendelenburg position. About twenty-five per cent. have headache after operation. He has never had any muscular paralysis, and not more post-operative rise of temperature than in chloroform narcosis.

INTRASPINAL ANALGESIA.

CASE.	Description.	Sex.	Age.	Operation.	Flow of Cerebro-spinal Fluid.	Dose of Cocaine (Centigrams).	Reflexes gone.	Legs heavy.	Perineum and Scrotum.	Feet and Legs.	Thighs and Groins.	Analgesia complete.	Height of Analgesia.	Duration.	Motion possible in	Condition during Operation.	After effects.	Shock.	Remarks.	Patient's Opinion of Operation.
I.	Very weak.	F	64	Double femoral herni-otomy.	Free, 5 cc.	1 m.	1 m.	1 m.	1 m.	1 m.	1 m.	3 m.	1 inch below nipple.	Op. 21 m. hrs.	Op. 3 m. hrs.	Nauseated, but did not vomit. Head aching, but had no pain of this before operation.	None.	No.	Satisfactory.	Pleased.
II.	Very weak with rapid pulse.	F	63	Intestinal obstruction.	Free, 2 cc.	3 m.	2 m.	2 m.	2 m.	2 m.	3 m.	4 m.	1 inch above umbilicus.	Op. 20 m. hrs.	Op. 3 m. hrs.	Good, no nausea, pain or headache, well next day, in somnia for several nights after.	Vomited once, slightly, first night.	No.	Quite satisfactory.	Pleased with it.
III.	Very weak. General carcinoma of abdomen.	M	55	Exploratory laparotomy.	Free, 2 cc.	10 m.	10 m.	10 m.	15 m.	10 m.	15 m.	30 m.	Umbilicus.	Op. 30 m. hrs.	Op. 3 m. hrs.	Good, no nausea or headache.	None.	No.	Satisfactory.	Pleased.
IV.	.....	M	25	Right inguinal herni-otomy.	Free, 2 cc.	8 m.	8 m.	8 m.	9 m.	9 m.	10 m.	15 m.	Margin of ribs.	Op. 20 m. hrs.	Op. 5 m. hrs.	Good.	None.	No.	Satisfactory.	Pleased.
V.	.....	M	23	Herniotomy.	Free, 5 cc.	4 m.	4 m.	4 m.	4 m.	6 m.	6 m.	8 m.	Level of A. S. S.	Op. 15 m. hrs.	Op. 3 m. hrs.	Good.	None.	No.	Satisfactory.	Pleased.
VI.	Fat man. Albuminuria. Retention of urine from in-penetrable stricture of urethra.	M	65	External urethrotomy.	Free, 5 cc.	1 m.	1 m.	1 m.	1 m.	1 m.	2 m.	2 m.	Umbilicus.	Op. 1 hr.	Op. 2 hrs.	Good, no nausea or headache.	None until two weeks later, then delirium and mania, which lasted six weeks, and then patient quite recovered from it.	No.	Satisfactory.	Pleased.
VII.	Pale and weak. Slight lateral curvature of spine.	M	21	Had a large growth in right iliac region, which I took to be Sarcoma.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* I tried to insert needle into 2nd and 3rd lumbar spaces without success. This was probably due to the curvature.

INTRASPINAL ANALGESIA—Continued.

CASE.	Description.	Sex.	Operation.	Flow of Cerebro-spinal Fluid.	Reflexes gone.	Legs heavy.	Perineum and Scrotum.	Feet and Legs.	Thighs and Groins.	Analgesia Complete.	Height of Analgesia.	Duration.	Motion Possible.	Condition during Operation.	After Effects.	Shock.	Remarks.	Opinion of Patient.
VIII. Mr. T. Mar. 28, '08	Almost moribund. Pulse 150. General septic peritonitis.	M	16 Laparotomy for septic peritonitis and drainage.	Free	Seg. 3 m. 2	Legs heavy.	2 m. 2	2 m. 2	3 m. 3	4 m. 4	1 inch below umbilicus.	Op. 20 m. hrs.	In 3 hrs.	No change in pulse. None. No headache or nausea.	None.	Not increased.	Died from septic peritonitis in 36 hours.	Complained of a little pain.
IX. Mrs. B. Mar. 28, '08	Very ill, weak, rapid pulse. Condition did not justify general anesthetic.	F	14 Laparotomy for pelvic abscess due to pus tube.	Free	Seg. 5 m. 5	Legs heavy.	5 m. 5	6 m. 6	8 m. 8	10 m. 10	1 inch above umbilicus.	Op. 45 m. hrs.	Op. 3 hrs.	Excellent. Was a little nervous, but pulse was good.	Was a None.	No.	Most satisfactory. Removed tube and evacuated abscess.	Pleased.
X. Mr. B. Apr. 14, '08	Extravasation of urine.	M	55 External urethrotomy.	Free	Seg. 2 m. 3	Legs heavy.	3 m. 3	5 m. 5	6 m. 6	10 m. 10	1 inch above umbilicus.	Op. 11 hrs.	Op. 2 hrs.	Good.	None.	No.	Satisfactory.	Pleased.
XI. Mr. S. Apr. 16, '08	Had had a general anesthetic twice. After first developed pneumonia, after second a bad heart. It was thought unwise to give a general anesthetic again.	M	60 Closing fecal fistula.	Free	Seg. 3 m. 3	Legs heavy.	3 m. 3	3 m. 3	4 m. 4	4 m. 4	Costal margins.	Op. 25 m. hrs.	Op. 21 hrs.	Good, no headache but well for two weeks, after which he became delirious. This lasted for a week, and then was recovered from.	Restless and noisy for 24 hours, then more comfortable for a week. He then became delirious, which condition lasted for 4 weeks. Made good recovery.	No.	Satisfactory.	Pleased.
XII. Mr. T. May 2, '08	Cancer of rectum. Weak pulse, General condition poor.	M	65 Colostomy.	Free	Seg. 5 m. 5	Legs heavy.	5 m. 5	8 m. 8	10 m. 10	15 m. 15	Umbilicus.	Op. 35 m. hrs.	Op. 2 hrs.	Good.	Restless and noisy for 24 hours, then more comfortable for a week. He then became delirious, which condition lasted for 4 weeks. Made good recovery.	No.	Satisfactory.	Pleased.
XIII. Mr. C. May 24, '08	Enlarged prostate. Weak pulse, intermitting.	M	72 Prostatectomy, perineal.	Free	Seg. 5 m. 5	Legs heavy.	5 m. 5	8 m. 8	10 m. 10	15 m. 15	Umbilicus.	Op. 35 m. hrs.	Op. 2 hrs.	Good.	Restless and noisy for 24 hours, then more comfortable for a week. He then became delirious, which condition lasted for 4 weeks. Made good recovery.	No.	Satisfactory.	Pleased.

* Failed to insert needle into lumbar sac in 2nd and 3rd lumbar spaces.

INTRASPINAL ANALGESIA—Continued.

CASE.	Description.	Sex.	Age.	Operation.	Flow of Cerebro-Spinal Fluid.	Pose Stovaine (centivertebres).	Reflexes gone.	Legs heavy.	Perineum and Scrotum.	Feet and Legs.	Thighs and Groins.	Analgesia Complete.	Height of Analgesia.	Duration.	Motion Possible.	Condition during operation.	After Effects.	Shock.	Remarks.	Opinion of Patient.	
XIV.	Hydrocephrosis.	F	58	No phre- cony.	Free.	2g.	1 m.	1 m.	4 m.	5 m.	8 m.	20 m.	1½ inches below umbilicus.	Op. 50 m. hrs.	In Motion.	Good.	None.			Satisfactory until abdominal organs above umbilicus were touched. It was found necessary to make another incision in right loin to remove the kidney. A general anæsthetic was then given.	
XV.	Anemic, with bony ankylosis of knee joint.	F	25	Excision of knee.	Free.	2g.	2 m.	2 m.	2 m.	2 m.	3 m.	8 m.	1 inch below umbilicus.	Op. 50 m. hrs.	3 hrs.	Good.	None.	No.	No.	Most satisfactory. Patient charmed with those about her, and had no ill comfort.	Pleased.
XVI.	...	M	24	Wireing tela.	Free.	2g.	2 m.	2 m.	2 m.	2 m.	2 m.	4 m.	Umbilicus.	Op. 80 m. hrs.	3 hrs.	Excellent.	None.	No.	No.	Satisfactory.	Pleased.
	Mr. L.																				
	June 2, '08																				

WHAT SHALL WE SAY TO OUR NEURASTHENIC PATIENTS?*

By GEO. S. YOUNG, B.A., M.B., TORONTO.

Speaking generally, and avoiding the entanglements of theory, painful emotions, such as fear, regret, anxiety and sorrow, cause nervous and physical fatigue. With repetition they easily become a habit and the resulting exhaustion is permanent. On the other hand pleasurable feelings, *e.g.*, confidence, tranquility, anticipation and hope, reduce mental friction and conserve energy.

These facts alone make it worth while to appeal to the mind in cases of neurasthenia. Although this is done in various ways, by Christian Science, faith cure, and healers of all sorts, more or less sincere, it is the duty of legitimate medicine to influence the mind through education. Hence I am of the opinion that the patient should be told, or rather should be made to believe, the whole truth regarding the nature of his illness, its causes, the part played by suggestion and auto-suggestion, and the mental conditions most favorable to recovery. The educational process may be slow, for many of these cases can only accept the truth in homeopathic doses. To tell them more than they will believe is worse than useless. The physician must quietly and tactfully feel his way into the patient's confidence, simplifying and adapting the message to his mentality, teaching him the ways of the mind and its influence over the body, but always aiming at the truth, which alone can make him free. The physician needs to have a true sympathy for the sufferings of these unfortunates—a sympathy, by the way, which they seldom get. He will not be handicapped if he has had a "touch of nerves" himself. He will be greatly aided if his experience has given him the enthusiasm of success. The physical examination should be thorough—if necessary extended over several days—and no comment or opinion given until it is completed. In fact, nothing can be omitted which will impress the patient and confirm the physician in the accuracy of his diagnosis and the sureness of his prognosis.

It is of the greatest therapeutic value to lay bare the patient's fears, ambitions, ruling passions and main-springs of action. Some one of these may prove a powerful agent, if emphasized by the physician, in holding him to a right course. Several years ago a young woman, suffering from hystero-neurasthenia, came

*Read before the Canadian Medical Association, June, 1908, Ottawa.

under my care. I had reason to believe that she was in love with a man who at that time had shown no preference. On the day following an hysterical attack, when the nerve-storm was over, I said to her: "It is probable that some day you will meet with your ideal, just as other women do. Nothing is so repelling to a man as a nervous wreck of a woman. If you would be attractive to your ideal when he appears, if you would become the capable wife that he will want, you must get the best of this nervousness. You *can* do it. I am ready to show you how. But you must make an honest effort. In two months you will be a new woman." She never had another attack.

Occasionally the physician meets with a patient who can grasp the whole truth of his condition at once. W. G. came to me in February, 1908, complaining of rheumatism and cardiac distress. He gave a history of rheumatic fever eight years ago. His "rheumatism" now consisted of fleeting pains all over his body and generally brought on by excitement. The slightest exertion caused rapid heart action and he was always conscious of its beating. He was easily fatigued, had a capricious appetite and slept poorly. Mental concentration was difficult and trifles irritated him beyond reason. The condition of his heart worried him greatly. He was a man of more than ordinary intelligence; besides, he had come from a distance, and distance lends confidence both to patient and physician. Hence I explained his case to him exactly as it appeared to me and somewhat as follows: "I have spent considerable time, Mr. G., in looking you over, because I wanted to be certain as to the nature of your trouble. First of all I want to assure you that your heart is not diseased and that the pains you have at present are not rheumatic. In the second place I can promise you that you will get completely well. You have neurasthenia, *i.e.*, a weak, irritable condition of the nervous system. You will be able to treat yourself to a large extent. Just take your watch and count the number of times you breathe in a minute." After several attempts he did so and the result was thirty. "Now," I said, "that is not your natural respiration at all, your breathing while you were counting was very irregular and much more rapid than usual. Your natural respiration is only eighteen, for I made a note of it a little while ago when you were not thinking about it. The fact is that just as soon as we fix our attention on our bodily functions we derange them. This is true of the heart. Suppose a man has an attack of palpitation from indigestion or excessive smoking. His heart is sound, but having had rheumatism at one time and knowing the possibility of its affecting the heart, he becomes nervous, begins to pay atten-

tion to the heart-beats, holds his breath to get them more distinctly, gradually forms a habit of watching his heart's action— isn't it reasonable to infer, especially after your breathing experiment, that in the course of months he would have a quick, nervous, irritable heart. I think you can see that the first thing you have to do is to get rid of the habit of paying attention to yourself. You can do this all the more readily when I tell you what is actually true, that you are physically sound. Next you must give up another habit which has been growing on you for almost a lifetime, viz., worrying. This is, of course, easier said than done, but a good way to accomplish it is to hunt out the pleasant things in life. Review them after you go to bed: it is one of the best cures for sleeplessness. The third thing is this: Never let anything or anybody hurry you. Do your work deliberately. Don't rush at it or through it. Let me tell you that new mental habits are not formed all at once. You may have "blue" days. Everybody has them. Life is not a dead level and you mustn't expect it, but I want you to realize that there is in store for you a healthful, happy life." A month later, when he called, I said: "You needn't tell me how you are, I can see it in your face." Before leaving he reminded me of his father, who had mild melancholia during his later years, and said: "I can plainly see now where I was drifting."

Almost all neurasthenies have certain fears and anxieties, generally as to their physical condition. No progress can be made toward recovery until these are removed—a bit of mental surgery which is sometimes exceedingly difficult. Early in March, Miss B. consulted me, not with the intention of receiving treatment, but for the purpose of getting an opinion as to how long she might live. She complained of great cardiac distress, which had made work impossible for over a year. She had lost in weight, had no appetite and slept poorly. The least exertion exhausted her. She confessed that she had been worrying almost constantly about her condition. After examination I said to her: "You have no organic heart disease. It is the nervous control of the heart which is at fault." She smiled incredulously. I continued: "I think you would like to ask why you don't get well if there is no disease, and I want to tell you that you *never will get well* until you realize that your heart is sound. Miss B., this is a matter of vital importance to you. For months you have not had one single pleasure in living. If you continue to go down hill you will not die, but you will become a bed-ridden invalid. Now, I am satisfied that I have not succeeded in convincing you as to the condition of your heart, and I want you to at once consult a specialist.

Go without any letter from me and get his unbiased opinion. When you have done so I want to have a talk with you, because you can be completely cured." Two weeks later she reported that she had felt so much better for a few days after her first visit that she had postponed seeing the specialist. I said to her: "Miss B., tell me frankly—was that improvement due to the tonic you got, or was it simply because I relieved your mind of some anxiety? You must, as an intelligent, educated woman, agree with me that no tonic could do so much in so short a time. Come back when you have consulted the specialist." She returned at the end of a week. "Well, what did he say?" "Why, he laughed and said, 'Who told you that you had heart disease?'" Her pulse had dropped thirty beats in three weeks and with this as an example I explained to her in detail how the mind may affect the body—how worry racks, exhausts and makes irritable the nervous system. I enlarged on the blessings of good health and told her to keep that always in her mind as a goal which she would surely reach. Three weeks later she took up her profession of school teaching, and at date of writing (May 18th) she considers herself perfectly well.

In many cases it is impossible at the outset to get the patient to accept more than a fraction of the truth. It requires careful judgment to decide how much can be believed. Mrs. M. had suffered from nervous dyspepsia for eight years, following a serious pneumonia. The smallest amount of nourishment caused distress. She was so much afraid of food that she was living on an occasional soda biscuit. I satisfied myself that it would be impossible in one sitting to convince her of any psychic element in her trouble. Hence the matter was placed before her in this way: "You are weak and unable to work because your body does not get sufficient nourishment. Examination has shown me that your stomach can digest more food than you are taking, but at first it will give you more pain. You must bear with this until your stomach becomes accustomed to handling more food, as it certainly will inside of two weeks. The road to health will be painful at first, but if you follow it bravely you will soon have more strength and then we shall be able to go a step farther toward giving you a perfect digestion. You may look forward with every confidence to complete recovery." She objected that she did not know what her husband would say to her giving up dieting. "Well," I said, "you will just have to argue it out. I am sure you can convince him if you go at it in the right way." There is nothing that will strengthen a woman's purpose like an argument with her husband. This patient has made substantial progress, but she will

not be cured until she can be made to realize that her stomach trouble has been prolonged for years by unhealthy mental processes of which she is not aware at present.

B. T. had been in bed for several weeks with the classical type of neurasthenia when I first saw him in February, 1907. A family history of tuberculosis made it difficult for him to allay his fear that he would never get well. After a long examination I said to him: "I have done my best to find some trace of organic disease about you and have completely failed. I can assure you positively that you will recover. Your progress for a time may be as slow as the hour hand of a clock when you watch it. You may even think some days that you are going back. I am telling you this because I don't want you to be disheartened when you have a bad day. There is really no need for discouragement no matter how you feel. Beyond this illness there are many years of usefulness for you and every day is bringing you closer to good health." After several weeks he had so far recovered as to be able to do light work, and later called at my office. He was improving but not by any means well. I explained to him that he had a nervous system which would not stand a great deal of strain and that he must live accordingly. We discussed worry and hurry as factors in the production of nervous exhaustion. He was cautioned against undertaking more than he could easily accomplish, against allowing auto-suggestions of "blueness," fatigue and even pain to fasten themselves on his mind without carefully reasoning out whether there was any justification for them. A few examples were given him of what suggestion from without may do. Above all he was counselled to make a hobby of happiness and to make himself firm in the faith by preaching it to others. He was fond of books and I advised him to read "The Pleasures of Life," by Sir John Lubbock. Before leaving, he said: "What you have said is just common sense, but if you had told me these things when I was in bed I would not have paid any attention to you."

In all these cases suggestion and auto-suggestion play an important part and can be used by both physician and patient to create hope, anticipation, and all the other rays of that mental sunshine which dispels nervous irritability and fatigue. The following case is an example of how suggestion may help to keep a desperate case from drifting over that vague line which separates the sane from the insane: In April, 1903, W. A. was brought home from a hospital, where he had been for several weeks, suffering from profound neurasthenia. He had been attending a theological institution during the day, doing mission work after

hours and using the night for study. This high pressure on a deeply emotional man with a psychopathic family history resulted in a complete collapse. Intense backache and headache, inability to turn in bed, nervous vomiting, urinary retention, outbursts of tears at the slightest sound, and sleeplessness, were a few of his symptoms. Week after week of daily visitation with every pretext for encouragement seized, was rewarded by a gradual improvement. Then, on one of his best days, taking advantage of his deep religious sentiments, I said to him: "Before your illness you felt that you had a divine call to the ministry. Does it not seem strange to you that just when you were bending all your energy to this end your purpose was apparently thwarted?" "I can't understand it," he said, "it is on my mind all the time." "Well, Mr. A., looking at it from the standpoint of your intended lifework, your illness is the best thing that could possibly have happened. It will broaden your sympathies and make you tolerant of the weaknesses of others. Not only this, but it will lengthen your working days by showing you how to take care of your health. It seems to me that this long siege of weakness and pain is just as necessary a part of your preparation as your theological training." The effect of this simple suggestion was astonishing. Its repetition in varied form was sufficient to keep him tranquil during the ensuing weeks of upgrade toward health. When finally he had reached the stage where he was able to do a good day's work on the farm without fatigue, he was allowed to begin reading, and it seemed time well spent to talk freely with him about the future. We discussed the possibility of relapse and the way to avoid it. He was cautioned particularly against being carried away in his work by emotionalism, which would mask fatigue and prevent him from knowing when he had reached the limit of his nervous capital. Later he went out West, and entered the ministry. A few months ago he called on his way to a foreign mission field. I asked him if he had had any return of his nervous trouble. "No," he said, "I learned how to take care of myself before I left here."

Could he have learned before his illness? Could his physician (if he had one) have been wise before the event? These are questions for the general practitioner. No one is in a better position to follow the neurotic strain from parents to children. By an injudicious opinion, by laying too much stress on a trivial complaint, he may plant a seed which will later yield a harvest of neurasthenic symptoms. On the other hand, his timely advice may prevent in after life many a nervous storm and even shipwreck. The time is coming when the family physician will prac-

tise a specialty of which no one can rob him. That specialty will be Preventive Medicine, and in no department will he be more successful than in that which concerns the mind and nervous system.

A CASE OF CHRONIC DIFFUSE NEPHRITIS WITH TERMINAL INFECTION.

By C. E. C. COLE, B.A., M.B.

House Physician Toronto General Hospital.

A. B. L., male, single, age 23, complaining of headaches and fainting attacks, was admitted on January 29th, 1909, to Toronto General Hospital under the care of Dr. Graham Chambers. Patient's father died, aged 56, of Bright's disease, illness extending over one year. Two brothers died of tuberculosis.

Patient was born in Jamaica and came to Canada four years ago. During childhood he had measles and chickenpox. At nine years had "brain fever" with marked delirium. For many years has suffered from boils. Before coming to Canada he had been very prominent in football, cricket, and other outdoor sports, and during the last four years, while clerking, had still retained interest in this direction. He smoked very little, and used no alcohol. He has never had venereal disease. About a year ago was refused for life insurance because of kidney disease. He was feeling "out of sorts" at the time, but soon recovered his sense of well-being, and had no further trouble till two months before admission, when epistaxis began, and continued almost daily in slight amount. Then cramps in his calves at night and pains in his eyes developed. Next he noted an offensive ammoniacal odor to his breath; and only a week before his admission severe frontal headache began. On Jan. 27th, 1909, while at work he had a fainting attack, which began with twitching of his hands. He walked home and next morning fainted again. On Jan. 29th walked into hospital, being clearly conscious.

The patient is fairly well developed. Temperature is 97 deg.; respiration, 24; pulse, 96; voice is slightly hoarse, and there is evidence of nasal obstruction. There is some difficulty in deglutition, owing to paresis of soft palate. The nostrils are filled with blood clots. Ulceration on both sides of septum. The

breath is ammoniacal. The skin is pale, dry and rough. Edema in the lower eyelids. There are many boils and scars in the skin, also numerous papules situated at mouths of hair follicles on thighs.

Circulatory System.—The radials are small and non-sclerosed, pulse 96, rhythm regular, volume fair, systolic pressure 155. P. M. I. is in fifth intercostal space in mid-clavicular line, cardiac dullness increased. Soft systolic murmur heard best over central and tricuspid areas with no definite line of propagation. Aortic second sound accentuated. First sound at apex is booming in character.

Blood.—R.B.C. 4,000,000, W.B.C. 11,000, H.B. 65 per cent. Blood culture is negative.

Respiratory System.—True crepitant rales are heard at right apex, posteriorly, otherwise lungs were normal.

Eyes.—Disc of right eye slightly swollen.

Urinary System.—Kidneys are not palpable. Analysis of urine is: Color, very pale; quantity, 80 ounces; sp. gr., 1.007; reaction, neutral; solids about 2-3 of normal; albumin present 2 per cent; sugar and bile absent. Microscopical examination: Amorphous urates, hyaline, granular and fatty casts, blood cells.

Feb. 5th.—Patient is weaker, dull and occasionally delirious. Breath is urinous. Vomiting occurred for first time since illness began. Blood pressure 185 mm. The urine is decreasing in quantity. Pus from abscess in skin showed streptococci. Pain in back.

Feb. 6th.—Epistaxis increased. Great difficulty in swallowing. B.P., 168 mm.

Feb. 7th.—Patient almost comatose. Pain in back is severe. Four ounces of urine in 24 hours. Resp. 22, pulse 84, rectal temp. 95.4.

Feb. 8th.—Rectal temperature varied from 95 deg. to 92 deg. W.B.C. count 45,000. Anuria.

Feb. 9th.—Patient comatose. Rectal temperature 92 deg.; B.P., 76 mm. Patient died during a general convulsion.

Diagnosis.—Chronic diffuse nephritis with pyemia.

Post Mortem Report.—(1) Cardiac hypertrophy, fibrosed tricuspid and pulmonary valves, also patchy sclerosis of aorta and coronaries.

(2) Bacillus coli and streptococci in blood of heart and spleen.

(3) Beginning pyemic pneumonia.

(4) Left chronic diffuse nephritis; aplasia of right kidney. The left kidney weighs 60 grammes, is irregular in shape, and has a very adherent capsule. Glomeruli are much enlarged. Areas of extreme atrophy. Right kidney replaced by a small mass of fibrous tissue connected by a fibrous cord to the ureter.

The interesting features of this case are:

- (1) Hereditary tendency to nephritis.
- (2) Possible origin from infectious fever fourteen years ago, or from chronic furunculosis.
- (3) Although the patient had apparently fair health until two months before his death the autopsy showed that there was only about one-fifth by weight of the normal kidney substance.
- (4) the passing of 80 ounces of urine, sp. gr. 1.007, ten days before death.
- (5) Vomiting for the first time only four days before death.
- (6) Complete anuria for 48 hours before death.
- (7) The gradual fall in temperature down to 92 deg., although the W.B.C. count was very high.

Medicine

GRAHAM CHAMBERS, R. J. DWYER, GOLDWIN HOWLAND, GEO. W. ROSS, WM. D. YOUNG.

On the Etiology and Treatment of Acne Vulgaris by Vaccines. ALEX. FLEMING, M.D. *The Lancet*, April 10th, 1909.

In a most interesting paper, Dr. Fleming, assistant to Sir A. E. Wright, at St. Mary's Hospital, London, discusses the Etiology and Treatment of Acne Vulgaris. He points out that Unna first described the acne bacillus and believed that it was responsible both for the comedo and the pustule. Saboraud sometime later redescribed it, but considered that in addition to comedo and pustule it also caused alopecia areata. Later still, Griffiths, of Baltimore, described it and succeeded in obtaining pure cultures, though with difficulty.

In its morphology the bacillus of acne is a short, curved rod, retaining the Gram stain. It is readily found in smears from comedones, but with some difficulty from pustules. Oftener the staphylococcus albus is an associated infection. Fleming found both bacillus and coccus in 53 cases, the bacillus alone in 49 cases, and neither in 7 cases.

The great difficulty experienced in cultivating the micro-organism is evidenced in the fact that Fleming only succeeded in 13 out of 132 attempts. A medium containing 1 per cent. oleic acid was the most favorable one found.

He next proceeded to study the blood of acne patients, and found that at times its agglutinating power was increased, though this was not a constant phenomenon. Neither did he find that the opsonic index was constantly below normal in untreated cases, though the administration of the acne bacillus vaccine resulted in a great increase of opsonic power. This increase, moreover, was associated with a clinical improvement of the patient's condition.

The interesting observation was made that acne pustules could be produced in susceptible cases by rubbing into the skin cultures of the bacillus, whilst in normal individuals nothing happened.

Of great practical importance are the results of treatment obtained in intractable cases of this troublesome affection. Fleming found that the exhibition of the appropriate vaccine or

vaccines enabled him to cure many cases not amenable to any other treatment. If the injection were a pure bacillus one, then the bacillus vaccine alone was used in doses of 4-10 million each week or two; if both bacillus and staphylococcus were present, then both vaccines were given, and if the staphylococcus seemed to be the sole cause of the eruption, then its vaccine alone was used. The following case is one quoted:

"Another case was that of a girl, aged 20 years, who had had very bad facial acne for five years. Films of pus showed many acne bacilli and in some pustules staphylococci were also to be seen. From Sept. 3rd, 1908, to Dec. 3rd, she was treated with stock vaccines of staphylococcus (200,000,000) and acne bacillus (5,000,000 to 8,000,000) without showing any definite improvement. From Dec. 3rd to Jan. 22nd, 1909, she has been having the same doses of the same staphylococcus with 8,000,000 of an acne bacillus derived from her own lesions. The improvement was immediate and marked, and now there is practically no pustulation, merely some indurated nodules and many scars."

This most instructive paper would seem to indicate a very promising treatment for a most trying disorder.

GEORGE W. ROSS.

For the past six months a similar investigation has been carried out at the Toronto General Hospital, with results closely approximating those of Dr. Fleming. These will be reported later. In brief, they are that almost all cases of acne vulgaris, no matter how intractable, yield to appropriate inoculation with either the bacillus of acne or staphylococcus vaccines, or both.—Ed.

Surgery

WALTER McKEOWN, HERBERT A. BRUCE, W. J. O. MALLOCH,
WALLACE A. SCOTT, GEORGE EWART WILSON.

Surgical Tuberculosis. E. M. VON EBERTS. *Montreal Medical Journal.*

The writer is a strong advocate of the out-of-door treatment for surgical tuberculosis. Even in winter the patient should remain the greater part of the day in the open air, being protected from the wind. Where possible it is well to have these patients sleep out of doors, using felt mattresses and abundance of light clothing. They should be given abundance of good food and served in the most palatable form. Weekly weighing should be carried out and the weights posted to encourage those undergoing the forced feeding. Surgeons should be careful to see that the patients get what they order for them. He is strongly in favor of using tuberculin R as an adjuvant, claiming to have had good results from its use. When cured these patients should report at the out-door once a week, and in case of neglect, nurse should investigate.

GEORGE EWART WILSON.

Congenital Diaphragmatic Hernia. E. B. LEECH, M.D., and C. H. S. REDMOND, M.B., Ch.B., late of Manchester. *The Medical Chronicle.*

Two cases of congenital diaphragmatic hernia are reported, the first occurred in a man aged 56, the second in a girl aged 15; as commonly occurs neither were diagnosed. In both the opening was on the left side posteriorly. The second case had a greatly dilated stomach with tetany, for which the abdomen was finally opened, but death ensued within a few hours. They think that the abdominal organs usually pass into the pleural cavity in early life. Minor symptoms may occur in dyspepsia, and a feeling of fullness and cyanosis after meals, with rapid recovery when the meal is ended. On the other hand, the symptoms may be severe, such as great respiratory embarrassment or from strangulation of the intestine, which occurs in about 16 p. c. of the cases. Most cases are discovered post mortem or during operation for some

other condition. As a rule, the hole is large and difficult to close, and the tendency is toward recurrence should it be closed. Surgical interference, except for complication or strangulation, is not advisable.

GEORGE EWART WILSON.

The Indications and Contra-Indications for Removal of the Gall-Bladder. LEONARD GAMGEE, F.R.C.S. *Birmingham Medical Review.*

1. The gall-bladder should never be removed if the patient be suffering from jaundice due to impaction of a stone in the common bile duct, no matter what other points in the case seem to indicate its removal (unless it be the site of malignant disease).

2. When a stone is found to be impacted in the cystic duct and the walls of the gall-bladder have undergone marked pathological changes, *e.g.*, very great fibrous thickening or hour-glass contraction, and more especially when the gall-bladder is full of pus or muceo-pus, the gall-bladder should be removed.

3. If the gall-bladder is in addition very adherent to the surrounding parts, *e.g.*, the stomach or duodenum, its removal is further indicated.

4. When there is no stone impacted in the cystic duct, but when the gall-bladder is shrunken, thickened, and adherent to the surrounding parts, always provided that there is no jaundice due to common duct obstruction, there are good reasons for removing the gall-bladder.

5. In cases of acute phlegmonous inflammation of the gall-bladder . . . if the abscess cavity were shut off by firm adhesions, and the gall-bladder easily separable, and the patient in good condition, cholecystectomy is perhaps a wise proceeding, but as a rule the securing of good drainage and the removal of the gall-stones will be the wiser course to adopt.

6. If the gall-bladder be the seat of malignant disease, it should be removed provided no growth be found elsewhere.

7. For mucous fistula persisting after the operation of cholecystotomy, removing the gall-bladder is the treatment most strongly indicated.

8. If the gall-bladder is free from adhesions, the peritoneal coat smooth, the walls not thickened and are semi-transparent, and its contents are healthy-looking bile and some gall-stones, and the ducts are quite free from gall-stones, the gall-bladder should certainly not be removed. The treatment here would be to remove

the stones and drain the gall-bladder. As indicated above, the gall-bladder ought not to be removed (unless for malignant disease) where there is jaundice due to obstruction of the common bile duct. The reasons for this are as follows: (1) A deeply jaundiced patient is a very bad subject for an operation, the resisting power is lessened and there is great danger of post-operative hemorrhage. (2) The necessity for adequate drainage of the biliary apparatus is great, for in these cases there is always a great deal of cholangitis.

The gall-bladder ought not to be removed if there be enlargement of the head of the pancreas. If the enlargement be due to malignant disease the removal of the gall-bladder would not alter matters, if on the other hand the enlargement be due to chronic interstitial pancreatitis the gall-bladder is necessary in order to provide a route for the prolonged drainage which is the essential treatment for this condition.

WALLACE A. SCOTT.

The Advisability of Removing the Appendix at the Time of Opening an Appendicular Abscess. H. H. CLOGG, M.S. (Lond.), F.R.C.S. (Eng.). *The Lancet*, March 6th, 1909.

The danger of removing the appendix at the time of opening the abscess is more theoretical than real. The advantages to be claimed for the primary removal of the appendix are the following:

1. The time of the healing of the wound is lessened. In calculating this due allowance is made for the size, situation, and depth of the abscess.
2. There is less tendency to imperfect drainage, which is at times seen during the course of the healing of an appendicular abscess. This is so partly because the supply of infection is removed and partly on account of the fact that the abscess cavity is so thoroughly opened that it may be drained from the most favorable position.
3. The rare complication of portal pyemia following a persistent sinus may be abolished.
4. An inflammation spreading up the right colon to the sub-hepatic or sub-phrenic regions may be anticipated and cut short by a timely lumbar drain.
5. The exploration of the abscess cavity will enable any concretions which have escaped from the appendix to be removed. It is true that often when the cavity is wiped dry these can be

detected and removed, but no doubt some will escape detection and will stand a better chance of being removed when the cavity is more thoroughly exposed, as it necessarily must be to remove the appendix.

6. The persistent sinus and frequently recurring breaking down of the scar will be practically abolished.

7. The risk of ventral hernia is by no means increased, but may be actually lessened.

8. The permanent changes in the wall leading to stenosis of the appendix and the very frequent presence of concretions in the lumen which have not escaped into the abscess cavity are most potent predisposing causes to recurrent appendiceal trouble.

Exceptions may be made to the statement that it is advisable to remove the appendix in all cases of suppuration. A pelvic abscess which can be easily incised through the rectum is better drained through this route. The drainage of a pelvic abscess through a hypogastric incision is most tedious. A much more rapid healing is effected in the majority of cases by means of a rectal drain.

WALLACE A. SCOTT.

Painful Heels. IRVING D. STEINHARDT, M.D. *The New York Medical Journal.*

A most frequent cause of painful heels is an acute productive inflammation of the os calcis, sometimes spoken of as exostosis of the os calcis, exostosis of the heels, os calcis spurs, and infected heels. There is usually a history of gonorrhea, chronic, gouty, rheumatic diathesis, and chronic traumatism in certain cases of weak foot by the rubbing and impaction of the os calcis against the external malleolus.

An X-ray picture shows one or more small spicules of bone protruding from the os calcis with a periostitis of the surrounding bone or a very much enlarged tubercle on the os calcis with a surrounding os calcis. The trouble is curable by proper treatment, and where the exciting cause can be ascertained and removed, recurrence will not take place. There is only one proper treatment, and that is the removal of the offending exostosis first and then post-operative treatment of the underlying cause.

WALLACE A. SCOTT.

Obstetrics

CHAS. J. C. O. HASTINGS, ARTHUR C. HENDRICK.

The Treatment of Eclampsia. WALLACE (W. L.). *New York State Journal of Medicine*, April, 1909.

The writer believes that in the past too much attention has been paid to the treatment of the convulsions rather than the conditions giving rise to them. After all, the convulsion is only a symptom, and we should rather battle against the disease itself and its poisons and try to strengthen and support the patient.

The administration of chloroform to prevent or lessen a convulsion is strongly condemned, as the patient is already suffering from insufficient oxygenation an accumulation of CO_2 in her blood, and chloroform only aggravates that condition. The administration of morphine in doses of gr. $\frac{1}{4}$ hypodermically is less dangerous, but morphine slows the respiration and favors edema of the lungs. The least objectionable method is the hypodermic administration of morphine gr. $\frac{1}{4}$ and hyoscyne gr. 1-100, when treatment of the convulsions seems necessary.

The best treatment of the convulsions would be to pay no attention to them, but to terminate the pregnancy and eliminate the toxins, knowing that there would then be no convulsions.

As regards emptying the uterus one must remember that even that is not a cure-all, as many patients have their first convulsion after the uterus is empty, and many patients who are having convulsions are not saved by emptying the uterus.

We should empty the uterus, not for instant relief, but for the benefit to be received to-morrow, or next week.

Terminating the pregnancy does not repair the damage already done, or remove the poison from the blood.

But there is never need for haste, and the greatest cleanliness and care should be exercised. These patients are in no condition to stand the additional shock of a violent delivery, and, besides, they are very susceptible to sepsis. Much on a par with rapid, forceful delivery is renal decapsulation, as proposed by some writers, but there is nothing wrong with the kidneys *per se*.

Wallace summarizes his present treatment as follows:

1. Alleviate the convulsions, if deemed necessary, with a small narcotic, avoiding drugs like chloroform, which disorganize

the liver and depress the patient; remembering that she needs oxygen by artificial respiration.

2. Stop the production of more poison by emptying the uterus as rapidly as possible without having our efforts do more harm than good.

3. Combat the poison in the blood which is threatening to kill the patient. Avoid concentrating the poison. The fluids must not be reduced faster than the poison is eliminated. When nature cannot carry off the poison fast enough, she stores all the water possible in order to dilute, and the patient is edematous.

If much edema is present, hot packs are particularly dangerous, as the sweating will concentrate the poison and induce convulsions.

Dilute the poison, by adding fluids to the blood by salines. If intravenous are used, from one to three pints only must be used, as more will drown the patient.

Eliminate the poison by washing out the stomach and rectum and the blood. These patients are constipated. There is an obstruction of the bowels, even until the stomach is full of the back-flow of the toxic materials. Washing out the stomach is on a par with artificial respiration, and must not be neglected. The tubing from a fountain syringe may be used if no stomach tube is at hand.

Administer hot, well-diluted Epsom salts solution through the tube, if the patient is unconscious. This will be rapidly absorbed by the stomach and the bowels will soon move.

Bleed if necessary to save the danger of impending apoplexy or pulmonary edema to abstract some of the poisonous blood, replacing it by salines and by venous transfusion. The abstraction of a pint of blood removes a portion of the poison and makes the blood-vessels hungry for the diluting salines. If circumstances will permit, a venous transfusion will save many comatose cases which are in extreme condition. ARTHUR C. HENDRICK.

Hyperemesis During Three Pregnancies. WEST (J. N.), *Post Graduate*, Vol. XXIV., No. 4.

Doctor West reports the successful treatment of the vomiting of pregnancy in a patient who had twice previously suffered in that regard, by the administration of morphia by the hypodermic method. In this case the patient's urine remained normal. The dose of morphia was gr. $\frac{1}{4}$, continued for some weeks. The vomiting began about the third month.

ARTHUR C. HENDRICK.

Pathology and Public Health

JOHN A. AMYOT, O. R. Mabee, GEO. NASMITH.

On Some Properties of Tubercle Bacilli Cultivated on Bile

CALMETTE and GUÉRIN, *Compt. Rend. Acad. Sc.*, Dec., 1908.

The tubercle bacilli were cultivated on potato soaked in bile containing 5 per cent. glycerine, sterilized at 120 deg. C., and left at laboratory temperature for three weeks. The bacilli grew more luxuriantly than on the usual medium, and were more virulent to guinea-pigs. In cattle they are easily absorbed by the digestive route, and when they penetrate by this road in sufficient quantity they produced rapidly calcifying lesions that one does not obtain with ordinary cultures. Injected intravenously into cattle they produce a general febrile illness without forming tubercles, reacting like the typhus bacillus.

From this method of culture the writers have drawn a most interesting method of diagnosis:

"Tuberculosis of human origin is cultivated with great difficulty on ox bile; avian tubercle will not grow at all. On the contrary, each of these two types, sown respectively on human and fowl bile, develops very rapidly; their cultures assume then the same aspect as those of bovine tubercle on ox bile."

G. G. NASMITH.

Carriers of Malaria Organisms. DAELDE, from *Bull. Inst. Past.*

The author sought to find out whether there did not exist carriers of the plasmodium of malaria, as there are carriers of the organisms of typhoid and epidemic meningitis. He studied one hundred and twenty-four aspirants to the military service of the Dutch Indies, for the most part old soldiers of the Indies or Europeans who had lived there for a long time. In ten perfectly healthy individuals he found the germs of tertiary fever, and in six those of tropical fever. These individuals may be the source of infection for others, and on that account the writer considered that great attention should be taken to the military depots where colonial troops are stationed.

G. G. NASMITH.

Reviews

Bacterial Food Poisoning. By PROF. DR. A. DIEUDONNE, Munich, translated and edited, with additions by Dr. CHARLES FREDERICK BOLDUAN, Bacteriologist, Research Laboratory, Department of Health, City of New York. Svo; 128 pages. Cloth, prepaid, \$1.00 net. E. B. Treat & Co., 241-243 West 23rd Street, New York.

This very excellent little translation treats in a very instructive and convincing way the subject of food poisoning. In the introduction Dr. Diendonné says: "At one time most cases of poisoning through food-stuffs, especially meat poisoning, were thought to be true intoxications through putrefactive substances, ptomaines, etc. Recent investigations, however, have shown that they are mostly due to certain specific bacteria, and then either following the introduction of the specific pathogenic bacteria themselves (infection) or following the introduction of the specific poisons produced by the bacteria (intoxication)." He then goes on to show the great majority of the poisonings are due to the bacillus enteritidis, the bacillus paratyphi, the bacillus proteus and the bacillus coli of the aerobic group, and again to the bacillus botulinus of the anaerobic group, giving experimental evidence of this in each case. He discusses the difference between the resulting poisonings, and ends up with a chapter on the metallic poisons in food. A good bibliography is also given.

J. A. A.

Parcimony in Nutrition. By SIR JAMES CRICHTON BROWNE. (An expansion of the Presidential address to the Section of Preventive Medicine of the Royal Institute of Public Health in England, July, 1908.) Funk and Wagnalls Co. Price 75 cents.

This little book by Sir James Crichton Browne is intended primarily as a counterblast to the new wind of doctrine of low diet advocated by Professor Chittenden, of Yale. The views are those of a man who has drawn his data from all possible sources, and, while recognizing the scientific accuracy of the metabolism experiments of Chittenden on groups of human beings, in which the latter found that man could live, work and enjoy good health on diets roughly about one-half that taken by the average human being, still he contends that it is dangerous to swing too far the other way. To Chittenden's experiments he opposes the diets of

millions of human beings, such diets having been evolved by centuries of experience and proved to be eminently satisfactory.

Sir James believes that in large cities fully one third of the inhabitants are under, rather than overfed. He believes that in some classes there is a certain amount of overeating, and these classes he thinks might well profit by Chittenden's results; on the other hand he does not agree with Chittenden that meat eaters are laying up future punishment for themselves, but shows that the great advances made in the world have been, and are being made, by those who use a liberal protein diet, the protein of which may be most advantageously obtained from meat.

In an age of faddists and diet crauks such a book from so eminent an authority is timely and should prevent us from committing ourselves blindly to the new starvation theory. To teachers and students of domestic science especially, who are such influential factors in the problems of dietetics nowadays, it should prove especially helpful in showing that laboratory data, valuable as it may be, is not the only method of arriving at sensible conclusions. According to Mrs. Rorer, a nut sandwich is sufficient for a working man's lunch, but no working man would admit it.

Sir James takes obvious delight in ridiculing "Fletcherism" or "The Chewing One's Self into Health" theory. The book shows a quiet vein of humor throughout, which makes it even more enjoyable.

G. G. N.

Diseases of the Eye. By M. STEPHEN MAYOR, F.R.C.S., late Hunterian Professor, Assistant Surgeon and Pathologist Central London Ophthalmic Hospital, with 119 illustrations and eight color plates. London: Henry Frowde, Oxford University Press, Hodder and Stoughton, Warwick Square, E.C. Price, \$1.50.

This is an excellent little book of 380 pages, which gives a student a definite working knowledge of diseases of the eye, and the practitioner a ready reference for the ordinary case coming to him for treatment. The illustrations are very good, the print clear and there is not an unnecessary sentence in the text. There is a useful appendix referring briefly to the Calmette reaction, a list of prescriptions, and the visual tests required by the services. One can recommend it as a very useful and readable little volume.

W. H. L.

Appendicitis and Diseases of the Vermiform Appendix. By HOWARD A. KELLY, M.D., Philadelphia, London and Montreal (Lindsay Building). J. B. Lippincott Company.

This volume comprises nearly five hundred pages of well printed matter. It contains three plates and two hundred and fifteen illustrations, which for beauty and accuracy it would be difficult to surpass, as they have been provided by artists of well-known and recognized ability. This is one of the conspicuous features of the work.

There is a very interesting chapter upon the History of Appendicitis and the anatomy of the part is carefully dealt with, while some ninety pages are devoted to the pathology.

In the diagnosis, stress is placed upon the leucocytic count and unless there is a decrease or an absence of the eosinophiles a diagnosis of active appendicitis is not justifiable, no matter what the total count is.

While we consider this the most exhaustive treatise on appendicitis, in English at least, yet to those accustomed to reading works from the pens of British writers there seems to be a considerable amount of padding. There seems to us to be too great a tendency to discuss irrelevant matter. For instance, subphrenic abscess is treated as though it were the subject-matter of the book, and so with many other topics. Then a great many pages are devoted to the anatomy, which might well, we think, be left for the pure anatomist to describe.

There is one small typographical error on page 348, H. L. Barnes being used instead of H. L. Barnard. This we note because Mr. Barnard has lately passed away.

Undoubtedly the book contains a vast amount of information and is one which every surgeon should have in his library.

G. E. W.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles by leading members of the medical profession throughout the world. Vol. I. Nineteenth series. 1909. Philadelphia and London: J. B. Lippincott Co. (Montreal, Lindsay Building.)

"International Clinics" is a work so well known to the medical profession that mention of its make-up is unnecessary. The volume before us contains sections on treatment, medicine, surgery, gynecology and obstetrics, genito-urinary diseases, proctology, rhinology, dermatology, pathology, and progress of medi-

cine during 1908. The articles are all well written and instructive, and include among many others the following: Occupations and so-called rheumatic pains, by J. J. Walsh; Mikulicz's disease, by Campbell Howard; acute tubercular rheumatism, by Poncet and Leriche, of Lyons, France; Sporotrichosis, by Duval and Vinard, Paris; absorption from the peritoneal cavity, by W. G. MacCallum, Johns Hopkins University.

An important feature of this volume is an epitome of the progress of medicine during 1908. This should be very valuable to practitioners.

Saunders' Pocket Medical Formulary. By WILLIAM M. POWELL, M.D., Author of "Essentials of Diseases of Children." Containing 131 formulas from the best known authorities. With an appendix containing Posologic Tables, Formulas and Doses from Hypodermic Medication, Poisons and their Antidotes, Diameters of the Female Pelvis and Fetal Head, Obstetric Table, Diet-lists, Materials and Drugs used in Antiseptic Surgery, Treatment of Asphyxia from Drowning, Surgical Remembrancer, Tables of Incompatibles, Eruptive Fevers, etc., etc. Ninth edition, adapted to the 1905 Pharmacopeia. Philadelphia and London: W. B. Saunders Company, 1909. In flexible morocco, with side index, wallet and flap, \$1.75 net. W. B. Saunders Company, Philadelphia and London; Canadian agents: J. A. Carveth & Co., Limited.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

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GEORGE ELLIOTT, MANAGING EDITOR

Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 221 Beverley St., Toronto, Canada

VOL. XXXII.

TORONTO, MAY, 1900.

No. 5.

COMMENT FROM MONTH TO MONTH.

Pasteurization of Milk. Pasteurization has of late been strongly recommended as a means of rendering safe the general milk supply of large communities where it is so difficult to be sure of its safety, coming as it does from so many sources. To guard against tuberculosis, Chicago has passed an ordinance obliging the pasteurization of all milks not coming from tuberculin-tested animals. In one of the large cities of the East a large series of samples taken from the general supply showed on animal inoculation the presence of living tubercle bacilli in 14 per cent. of the samples. Wide experience with the tuberculin test shows an alarming amount of tuberculosis amongst dairy cattle. An animal suffering from tuberculosis may at any time give off, even without udder lesion, tubercle bacilli to her milk. Where milk is taken from all sorts of sources and mixed, the consumer gets a sampling from all, and serious chances to take in tubercle bacilli, some would say for dilution also, but that is not a very reliable safeguard. A guinea-pig may be inoculated successfully with five single tubercle bacilli. Bovine tubercle bacilli are, fortunately, not as virulent to man as the human type is, but even

Koch now admits that many cases of surgical tuberculosis are due to the bovine bacillus.

We know that typhoid fever outbreaks have been precipitated by milk. Before milk has become sour it is a good culture medium for the Eberth bacillus. There are typhoid carriers about. Many cases of typhoid fever in milk handlers are not diagnosed until late in its course. In one city lately a large dairy firm stopped milk from two typhoid farms a week before the city authorities knew there was typhoid on the farm.

Scarlet fever outbreaks, many of them, are recorded as being carried by milk. Many scarlet fever cases go through their course without medical attendance, sometimes even are quite unrecognized. Mastitis is quite frequent in dairy cows, thus streptococci and staphylococci may be carried to the consumer.

Who ever heard of a milker suffering from a cold or distinct influenza refraining from handling milk? Can it be conceived that any city inspection will be sufficient to eliminate, be it ever so faithfully carried out in practice, all these risks, not imaginary ones at all?

In nine cases out of ten milk is overrun by lactic acid bacilli; these do no harm except to sour the milk. This renders it an unfit medium for many bacteria to propagate in. In the tenth case putrefactive bacteria get the upper hand. Putrid proteid is dangerous. In the hot months of the year when this putrefaction is most liable to take place, we know that the mortality amongst infants from this cause is twice that of the other months of the year. The Rochester experience with non-putrid milk has shown that these hot month mortalities can be reduced to that of the other months. Rigid inspection and the enforcement of the rules of cleanliness and the liberal use of ice brought this about. But only a few hundred quarts of this milk were produced. Constant care was required under careful instruction.

Careful, honest inspection of the cows, the handlers, the utensils, the transportation, the storage and the delivery will do much. Experienced men, *not cold blanket men*, will tell you that it cannot under our present conditions be adequate.

Proper pasteurization with subsequent cooling to 45 deg. F. will remove the danger from all the diseases mentioned, nearly to the point of certainty. To accomplish this a constant temperature of 150 deg. F. for at least twenty minutes is required. There are machines now constructed that will do this. The great majority of milk pasteurizers heretofore used are of the 3-4 minute type, quite inadequate, and false security producers, and have done much damage to the reputation of the process.

The serious objections to the process are: First, "Dirty milk will only be cooked." It is the municipal authorities' duty to see that no dirty, putrid milk comes into the city. If they have not got the power they should be given it and then let it be seen that they do their duty in spite of the cost. Indict the municipality if it does not enforce the law. Secondly, "It will retard the procuring of the ideal." That is an excuse to get out of spending money for inspection, to avoid stirring up trouble; besides should we go on dying until the public is educated to recognizing that they must pay for ideal milk, and until the producers learn they must acquire the technique of surgical cleanliness? A whole generation of objecting surgeons had to die out before surgical cleanliness became a recognized *sine qua non*. Thirdly, "The milk is destroyed as a food." This is a "bugaboo." Many delicate proteins are unaffected by a temperature of 150 deg. F. for twenty minutes, only the most delicate ferments are affected by this temperature. Pasteurized milk is not boiled milk. Unbiased evidence is rapidly accumulating to show that such milk is at the very most only slightly altered in food value. The compensatory security outbalances many times any slight deterioration. Why should we go on following bell-sleep? Fourthly, Pasteurized milk is more liable, if not kept constantly cooled, to undergo harmful changes, because the restraining lactic acid bacilli are killed out in the process, leaving the field to the spore-bearing bacteria, which are nearly all putrefactive. Perhaps it is a little more fragile than unpasteurized, but can't the consumer be taken into our confidence a little. If he keeps the milk cool until used he need have no trouble from this score.

Looking at this subject with an open mind, it seems clear that until the ideal is obtained pasteurization is the remedy at our hand for present conditions and for much time yet to come.

JOHN A. AMYOT.

Status Lymphaticus. — The condition known as status lymphaticus, although somewhat rare, has aroused considerable interest, owing to the fact that the administration of anesthetics, or the performance of even slight operations without them, is attended with grave risk to life.

Status lymphaticus, or status thymicus, is a general condition of the patient characterized by enlargement of the lymphatic glands, tonsils, follicles at the base of the tongue, spleen, and lastly, of an enlarged thymus gland which varies in size in different subjects.

Paltauf who, in 1889 and 1890, was the first to collect a large

number of cases of sudden death in adults, found, on post mortem, the above conditions in an extreme degree, and also found in most cases that there was a narrowing of the aorta. He attributed the sudden deaths of patients of this type to cardiac paralysis and acute heart dilatation. Kundrat, in 1895, published ten cases of death after anesthesia by chloroform, or a mixture containing it, collected from post-mortem records in Vienna, on section all showing marked characteristics of the lymphatic diathesis, and also one case in which ether was the anesthetic. He showed that danger symptoms began with the heart; respiration lasting some time after cessation of the pulse.

He also noted the association of status lymphaticus with Basedow's disease in one case, and the remarkable flaccidity and recent dilatation of the ventricles of the heart found post-mortem. In other cases of death during anesthesia, in which he found the characteristics of status lymphaticus, but in which no enlargement of the thymus gland was found.

To the writings of Paltani and Kundrat little can be added at the present time, but since these men have made their observations, many sudden deaths of children have been recorded apart from anesthesia, in whom post mortem has found this condition of "Lymphatism" as it is more modernly termed, and associated with it hypertrophy of the thymus gland.

Death from chloroform has so frequently occurred in subjects of this condition that it has been questioned whether death under chloroform when properly administered, ever does occur apart from this condition. Elser states that the administration of chloroform to patients of this status is nearly always fatal.

Dr. W. J. McCardie, anesthetist General Hospital, Birmingham, has made some careful observations, from which I quote the following: "Many cases, particularly children in practice which I suspect to be of lymphatic diathesis, have, during anesthesia, given trouble, especially during the administration of chloroform, and so often have these troubles occurred, that I am sure that some other factor than chloroform *per se* has come into action—namely status lymphaticus. All have been young or fairly young people or children. Most of them have been of the flabby type, generally having adenoids and enlarged tonsils, occasionally enlarged thyroid, very often an enlarged tongue, and suspected enlarged thymus; generally their pupils have been larger than is usual, their pulses soft and comparatively slow, and their heart sounds have been weak, and what I call "flappy" or "thin," giving the idea of thin walled and rather dilated ventricles. Many of the cases have had the typical adenoid, and characteristic, narrow, high-arched palate, small mouth and

throat. They seem to suffer more acutely than ordinary patients from shock, and the distance between ordinary deep anesthesia and danger appears to be shorter in them than in the cases of normal patients."

So far as has been known, in not one of these cases of death under anesthesia has the condition been diagnosed as lymphatic.

E. S. Cherich, and other Vienna clinicians, have been quoted in recognition of the status as follows: "Pale, thin skin, pasty complexion, a good deal of subcutaneous fat, frequently signs of rickets or scrofula, enlargement of the superficial glands, especially in the neck and axilla, enlarged tonsils, adenoid growths, and a palpable spleen."

McCardie, besides noting enlargement of the tongue follicles, has also noted enlargement of the tongue itself. The presence of enlarged tonsils and adenoid growths, one or both, have been noted in every case of death during anesthesia in patients of this diathesis. Thus, inside the mouth alone, may be found many conditions which are associated with general lymphatic hyperplasia.

Other pathological conditions have been noted as being associated with status lymphaticus, and, perhaps, the most important is exophthalmic goitre. If this association is present a double reason for heart failure in operations on the thyroid is present.

A number of cases of exophthalmic goitre examined post mortem, though enlargement of the thymus was noted, status lymphaticus was overlooked, and possibly this condition is responsible for more of the sudden deaths in Grave's disease than has been believed.

Epilepsy and rickets are the other conditions more frequently associated with it.

In view of what has been observed, it would not be too much to suggest, that when possible a very careful examination of the lymphatic system be made, and thus possibly avoid a fatality.

SAMUEL JOHNSON,

What part the iodine in the thyroid plays in physiological significance no one knows definitely, as opinions on the subject differ widely. There are generally held three separate views on the subject: 1. Some investigators hold that the activity of thyroid is directly proportionate to and dependent upon its iodine content, and that thyroid free of iodine has no physiological activity. 2. There is another group of writers who take the view that there is no relation between the physiological activity of thyroid and its iodine content, and that no importance should

be attached to the iodine which is usually present in the thyroid.

3. Other writers admit that there is a parallelism between the physiological activity and the iodine content, but deny that the former is dependent on the latter, simply considering that the iodine is simply associated with the active part of the gland in some unknown, perhaps accidental way. A unique drug, its use was the first practical application of internal secretion medication. Attention was actively brought to thyroid as a drug in 1895 when Baumann made the discovery that the gland usually, but not always, contained iodine; hence, ever since, the relation of the iodine to the physiological activity of the thyroid has been the centre of interest for experimental study. The element iodine, itself, was discovered in 1812 by Courtois, and seven years afterward it was suggested by Straub, of Berne, that it was the active principle of the "toasted sponges" given for goitre since about the middle of the thirteenth century. Following on the suggestion of Straub, from the year 1820 iodine has been the main drug administered in thyroid diseases. Baumann's view that iodine formed an important part of the "active principle" of the thyroid has not gone unchallenged; and the latest authoritative production on the subject is to be found in Bulletin No. 47 from the Hygienic Laboratory at Washington. Herein are set forth the objections to the theory, and the chief arguments in favor of it discussed in detail. A summary of the experiments undertaken go to show that "iodine free" thyroid has a low degree of physiological activity, much less in fact than where more than distinct traces are present. Evidence is also presented to show that the physiological activity of the thyroid increases in direct proportion to the iodine contained therein. As most commercial thyroid preparations are from sheep, special attention in the experiments and study was directed to them; and the opinion of clinicians is endorsed that these commercial thyroid preparations vary considerably in their activity. The question of dosage is rightly an important and interesting one. It is set forth from the experiments that a very weak thyroid preparation will, when given in a sufficient dose produce as great a physiological effect as an equal amount of a very active preparation. That is to say, there is a certain limit to the degree of resistance the body can acquire even under the most favorable circumstances. Then, as the doses approach the maximum, each successive increase will produce relatively smaller effects.

Liquor Arsenicalis is such a common and important drug in practice that it will be interesting to know it as we have it in Canada. During January of the present year the Laboratory of

the Inland Revenue Department at Ottawa caused to be collected in various sections of Canada, seventy-five samples of Fowler's solution. The chief analyst, Mr. McGill, considers that making all necessary allowances no freshly prepared solution should vary more than 0.010 per cent. of arsenic, the standard of the British Pharmacopœia. Fifteen of the seventy-five samples taken only fell within, or closely approached this standard. Eighteen varied by ten times this amount, or more. Twenty-one samples were not classified. Most of these samples according to law are adulterated; and in order to ensure a better degree of accuracy the chief analyst suggests adopting 0.020 per cent. of arsenic as a maximum limit in variability. This is the first report on an official analysis of Liquor Arsenicalis.

The Ontario Medical Association Meeting this year promises to be as successful and interesting as that of last year in Hamilton. In our last issue we published the preliminary programme, and whilst the full range of scientific subjects to be taken up and discussed was incomplete, yet from the names of those down for papers, one may fairly judge that the character of the papers will be fully up to the standard. It is understood that the efforts of the President, Dr. Herbert J. Hamilton, to secure a "tip-topper" are being ably seconded by all his committees, and those Ontario physicians who can arrange to be present—and many can at this time of the year—will be eminently satisfied with their attendance. It is becoming more and more apparent that medical men are desirous of a more intimate exchange of ideas and experiences, as well as renewing old associations, which can best be done by regular attendance at the annual meetings of Associations of this character. We bespeak for this meeting the cordial support from sister cities, as well as the country. Ottawa, Kingston, Hamilton, London, should send good delegations.

The Annual Meeting of the Canadian Medical Association is to take place this year in Winnipeg. The President, Dr. R. J. Blanchard, has taken an exceedingly active interest in this meeting, having been twice east in connection therewith. The dates are the 23rd, 24th and 25th of August, and taking place just prior to the meeting of the British Association will enable many interested in the latter to avail themselves of many of the advanced scientific lectures and discussions to take place. Evidences are in that the West is going to attend this meeting in large numbers. It is up to the East to meet them half way, at

the centre of the Dominion. No long stretches of barren rocks and Christmas trees, no great mountain ranges and prairie lands, no separate province which has many of its physicians members of the national medical body, should or will offer any barrier now or hereafter to attendance on these meetings. Contrary to a statement made in one of our leading medical journals that the Canadian Medical Association has a small membership it has one which should be considered large, namely, 1,500, one-quarter the medical population of Canada, quite proportionate, we think, to the American Medical Association, financially well-equipped as it is, and backed by powerful state societies, considering, too, that the C.M.A. has but the pay-as-you-attend fee system in vogue. Nor has the Canadian Medical Association been an idle body during the forty-two years of its existence. It early formulated the code of ethics from which all other medical societies in Canada have drawn their ethical inspiration. It soon got busy with standards for matriculation and professional examinations, and no doubt wielded a great influence on the formative period of medical education in this country. It established the Canadian Medical Protective Association, one of the very best institutions we have in the medical life of the Dominion. It right away after organization grappled with Dominion Registration and through Dr. Roddick ultimately placed upon the statute books of Canada the Canada Medical Act, which Act stands to-day ready to be taken advantage of whenever the Colleges of Physicians and Surgeons of the provinces will have passed the necessary ratifying legislation in their respective provinces. It took up the subject of a Department of Health for Canada some few years ago, and has earnestly endeavored to impress upon the Federal government that this is something urgently to be attained. It now has the assurance of the Prime Minister that its plan is a feasible one and that "it is only by knocking at the door that the door will be eventually opened." At present it has a milk commission at work prosecuting an active campaign for clean and pure milk. Its Legislation Committee is working for incorporation by Act of Parliament; and hopes are entertained in some quarters that we are on the eve of a stronger and larger association with all provincial societies affiliated, and an official journal to act as the connecting link to keep distant membership bound closely together. Need one say, in addition to all this good work the Canadian Medical Association has done, and is doing, that the medical journals of Canada have year after year had their pages enriched with the many excellent scientific papers which this Association has produced.

News Items

DR. J. W. STIRLING, Montreal, has returned from Europe.

DR. GEOFFREY BOYD and Charles Trow have gone to England.

DR. ARTHUR C. MUNNS, of Moorefield, Ont., has been appointed a coroner.

DR. C. S. MAHOOD, late of St. Catharines Marine Hospital, has gone to Victor, Colorado.

DR. FRANK PATCH has resigned as General Superintendent of the Montreal General Hospital.

DR. ALLAN KINGBORN, who has been investigating "sleeping sickness" in West Africa, is visiting in Toronto.

DR. D. G. DINGWALL, of Winnipeg, is en route for London, England, where he intends taking a post-graduate course.

DR. W. A. YOUNG, Managing Editor of the *Canadian Journal of Medicine and Surgery*, will spend the summer abroad, visiting England, France, and Italy.

DR. R. H. BONNYCASTLE, Campbellford, Ont., has been appointed physician to the G. T. R. to fill the vacancy caused by the death of Dr. T. W. Carlaw.

DRS. G. STIRLING RYERSON, W. H. B. Aikins, R. A. Reeve, A. H. Garratt, and Professor McPhedran will attend the International Medical Congress at Budapest.

DR. G. HAMILTON WYSE, who had been practising his profession in Stratford for about a year, recently left for Southport, England, where he will resume his former practice.

DR. R. W. ROONEY, of Shelburne, Ont., has arrived home from London, England, and other places in the British Isles. During the past three months or more, he took up a post-graduate course in New York.

DR. W. A. R. MICHELL, who graduated from the University of Toronto in 1902, was surgeon and biologist to the British Antarctic Expedition commanded by Lieut. Shackleton, which has attained such a measure of success. Dr. Michell is a native of Perth, Ont., and while at the university was very popular with the student body.

A CHEQUE for ten thousand dollars from Lord Stratheona has been received by His Grace Archbishop Bruchesi for the Hospital

for Incurables at Notre Dame de Grace, Montreal, and the supporters of that institution are much gratified at this. His Lordship's second mark of generosity and interest in the work which the hospital is doing among all races and creeds in the city. As a matter of fact the value of this institution appears to be widely known and appreciated, as His Grace the Duke of Norfolk sent a generous contribution not very long ago.

AMERICAN MEDICAL EDITORS' ASSOCIATION.—The coming meeting of this Association, to be held at the Marlborough-Blenheim Hotel, Atlantic City, June 5th and 7th, celebrates its 40th anniversary and an unusual programme has been prepared for the occasion. It is expected that delegates from the foreign medical press will be present, and every medical editor should make an effort to meet with this Society.

CANADIAN MEDICAL ASSOCIATION.—MILK COMMISSION.—Academy of Medicine, Toronto. Dr. C. J. C. O. Hastings, called the meeting to order at 4.30 p.m. The following members were present: Dr. Hastings, Dr. George Elliott (Secretary), Dr. J. A. Amyot, Dr. A. McPhedran, Dr. J. H. Elliott, Dr. W. B. Thistle, Dr. J. N. E. Brown, and Dr. Helen MacMurehy. Mr. John Ross Robertson was present by invitation. The subject under discussion was that of pasteurization. Dr. Hastings presented a memorandum on the subject presenting evidence and authorities in favor of pasteurization (official) for all milk not officially certified. Mr. John Ross Robertson then addressed the Commission, referring to his investigation of pasteurization in New York hospitals, the mortality at the Children's Hospital, Toronto, the necessity for pure and clean milk in that institution. It was his determination to at once proceed to the installation of a pasteurization plant in the Children's Hospital. Dr. John A. Amyot advocated official pasteurization, as well as other members of the Commission. The following resolution was then presented and adopted unanimously: "It must be apparent that it will require time and education to comply with even reasonable safeguards, and it is equally evident that the number of dairy farms now in a position to live up to sanitary requirements will supply but a small proportion of the population of the city. Until this can be accomplished the Commission strongly recommends that all milk not officially certified be pasteurized." A vote of thanks was tendered Mr. Ross Robertson for his address, as well as for his offer to send two or three members of the Commission to New York, at his expense, to investigate the subject of pasteurization.

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXII.

TORONTO, JUNE, 1920.

No. 6.

Original Articles

ANTERIOR POLIOMYELITIS.

By H. T. MACHELL, M.D., Toronto.

In connection with the history of the case of Anterior Poliomyelitis read at the first meeting of Section of Pediatrics of the Academy of Medicine, which was held in the Hospital for Sick Children, Toronto, October, 1908, the following summary of the cases admitted since January, 1899, is of interest.

Of the 30 cases admitted, 1899 to 1908, 4 occurred in 1900, and 8 occurred in each of the years 1905 and 1906. None in 1904. Thus 20 of the 30 cases occurred in 3 years.

Age.—Age at onset of attack averaged 3 16-30 years. Age on admission, 5 16-30 years.

Season.—August 8, September 4, October 4, January 2, April, May, November, December, 1 each; uncertain, 8.

Mode of Onset.—In 11, fever from 2 to 4 days, then paralysis; in 6, malaise, fever, etc., then paralysis suddenly in crossing a room in 2 cases, in 3 to 4 days in the others; in 2 nothing till paralysis noticed; in 2, caught cold, chill, 3 days later paralysis, no pain; in 1, chorea; 1 fell out of bed, then paralysis; 1 fell downstairs, then paralysis in 3 days; 1 pain in abdomen, irregular in character, followed by dragging of foot; 1 limp right leg; 1 gradual onset, pain in limbs; 1 went into cold water—then feverish—paralysis that night; 1 diarrhoea for one week, then drowsy and weak—paralysis in one week; 1 did not walk until 18 months old—clumsy in walking.

Thus in more than half the cases there was either fever or malaise and fever before the paralysis was noticed. In two, paraly-

sis followed a fall. In only one was pain or tenderness in affected limbs noticed.

(This was present in about one-half the cases in my private practice.)

Sequel to. Nothing, 13 cases; scarlatina, 3 cases; measles, 3 cases; enuresis, 2 cases; indefinite, 9 cases.

Course. In case No. 5 the sphincter of the bladder was lost for some time. In case No. 9 paralysis of abdominal muscles. Paralysis complete in all limbs. In case No. 11, facial paralysis in addition to left arm and left leg. In case No. 19, loss of sensation, as well as paralysis of right leg. (Temporary loss was probably result of transient interference with sensory structure in the cord.)

Paralysis occurred in.—Right leg, 22; left leg, 14; right and left leg, 9; right arm, 6; left arm, 9; arms and legs, 5.

(Paralysis of flaccid character is taken for granted, as no mention is made of any spasticity in any of the cases.)

Complications.—Pertussis in 3 months; otitis media (suppurative); enuresis for 10 weeks; pneumonia 7 months after attack began; measles during stay in hospital; scarlatina, died of diphtheria in Isolation Hospital; toxemic condition from antitoxin varicella.

PHYSICAL EXAMINATION PECULIARITIES.

Temperature remained up (98 2-5, 102F.) for 10 days after admission.

Muscles of left calf alone affected by knee-jerk was lost.

Knee-jerk left leg, triceps left arm. Right leg only paralysed.

Right knee-jerk, left knee-jerk hard to elicit. Right leg only paralysed.

Right knee jerk. Right leg paralysed.

(These cases disprove the statement occasionally made, that in a leg affected by infantile paralysis the knee-jerk is always lost. The fact is, if the vastus externus escapes, the knee-jerk will almost certainly be present.)

Complete paralysis of sphincters of bladder and rectum for 2 or 3 days, then gradual recovery. (The function of these sphincters was temporarily placed in abeyance, and as soon as the acute process subsided, these temporarily impaired structures resumed their function.)

Time Improving.—Case 3, can walk in 1 month; Case 4, can walk alone 7 weeks after admission; Case 5, can stand alone 2 1-2 weeks after admission; Case 7, improvement (leg) in 1 month (arm) in 2 months; Case 9, no improvement after 2 months. Abdominal and spinal muscles quite paralysed, slight improvement shown in

3 weeks. First began to walk in 9 months; Case 15, paralysis first in legs, arm, head. Improvement, legs, arm, head. Abdominal muscles paralysed. Improvement, arms and legs in 2 weeks. Improvement gradual in 1 month; Case 25, could walk in 4 weeks with assistance. Faradic reaction nil right leg, yet could stand on this leg in 4 weeks after treatment began. Could walk a little after 2 months. 4 months under treatment; Case 26, walked alone in 1 1-2 months. Right leg almost as strong as left in 9 weeks.

Treatment.—Massage. Electricity, mostly Faradism. Passive movements.

Massage From Day of Admission.—In one case for 14 1-2 months; in one case for 5 1-2 months; in two cases for 5 months; in two cases for 4 1-2 months; in three cases for 4 months; in three cases for 3 months.

How long ought one to persist with electrical treatment? About 1 year.

Result.—Cured, 1; incurable, 4; improved, 17; left hospital in a week or two, 3, unimproved; died of measles, 1; died in Isolation Hospital, 1.

I have to thank Dr. Boyer, House Physician, for most valuable assistance in culling the material which forms the basis of this summary from the histories.

A CASE OF PARAPLEGIA.

By J. T. FOTHERINGHAM, M.D., Toronto.

Some time ago there was admitted to the Hospital a little girl from Muskoka, with the following history:

Amy, aged 9 years, for the past eleven months had not walked or stood on her feet, and for seven months of the time had not been able to feed herself, from paralysis of arms, which had disappeared some time before admission. Six months prior to the onset of the paralysis she had had an attack of diphtheria, from which she made a good recovery.

The onset of the disability was sudden. As she was standing one day in the kitchen at her home she suddenly dropped to the floor, and from that moment ceased all attempt at locomotion. Enquiry failed to elicit any cause, either in family history or in personal happenings and surroundings, to explain the attack.

On making my first visit to her bedside I was struck, after glancing at the first part of the house physician's notes of the case, by the healthy, well-nourished look of the child, as well as by her precocious, semi-self-conscious, half-furtive way of "taking me in" and studying me. I continued to read the notes and watch her for a short time, then slowly turned down the bed covers to the foot of the bed, exposing the lower limbs fully. They had all the characteristics of a functional palsy, symmetry, entire absence of atrophy, posture determined by normal balance of opposing groups of muscles, healthful cutaneous circulation and nutrition, flaccidity without the loss of tonus, due to, for instance, anterior poliomyelitis, no change of deep reflexes, no sensory disturbance, no sphincter involvement nor vertebral disease, so, hazarding a rapid diagnosis of hysteria, I turned suddenly and addressing her for the first time said, "Amy, what did you come here for?" She replied, "I came to get better, sir." "Very well," I said, "to-morrow at a quarter past twelve I shall come back and set you over there at that mark on the floor and you will walk to that table, and there will be no trouble about it." I had the nurse at once make a plain chalk mark on the floor, where the child could see and watch it, ten or twelve feet from the table which stood in the centre of the ward, and left orders that the mark was not to be touched, nor the child removed from bed by any one for any purpose till my return next day. These orders were all given in her hearing. Upon my return at the hour set I picked her up and set her on her feet at the mark, and with very little hesitation she set off and reached the table eight or ten paces off, nearly going down once, but rallying on my sharp request to look up and keep her eyes on the ceiling. I carried her back to bed and repeated my order as to her non-removal from bed by anyone except myself. I told her that next day I would return and set her on the floor at the foot of her bed, and that she would walk to the table and back to bed herself, a journey of perhaps six times the length she had just accomplished. Sure enough next day the programme was successfully carried out. On the third day we let her up to go about as she pleased, and she had in this brief time bridged over the gap which had for eleven months existed between volitional impulse and successful motor-excitation of Rolandic cortical or anterior horn cells.

Her mother, who was an observant woman, said to me afterwards, "Doctor, I never could understand why that child could not walk, when at night she kicked the clothes off herself just as completely as any other child I have."

The very satisfactory result of this abrupt treatment by

suggestion, reminds one of the many similar cures wrought by irregular healers and wonder workers in all climes and ages, at Lourdes, Ste. Anne de Beaupre, and by the faith healers and Christian Science (sic) cult of the our own day.

This child's own physician had failed simply on the principle that familiarity breeds contempt, and the strong mental impression made by the unwonted experience of a long railway journey and isolation from her friends and home surroundings in the Hospital for Sick Children, had so aroused her higher psychic centres from their hibernating condition as to enable them, under strong suggestion and reassurance, to resume their control of the subconscious. I have little doubt that had she been left a few days to familiarize herself with her new surroundings, the attempt at cure would have been distinctly less likely to succeed. A light, clear enough so far as it goes, is thrown upon the mystery of the hysterical condition by the mother's remark about the kicking off the bed clothes when asleep. The submersion of the higher psychic or perceptive centres in the profound sleep of childhood left the sub-conscious processes free to go on normally under the ordinary stimuli of sensation from skin, joint, muscle or other source, and the normal maintenance of nutrition and absence of atrophy in such cases is doubtless due to the fact that the upper neurons have little to do directly with nutrition, which depends mainly upon the translation into centrifugal trophic impulse and control, at the anterior horn, of the centripetal stimuli above mentioned.

The case was a good example of the "Psychical Paralysis," of which one feature is the distribution. Such paralyzes do not involve single muscles, nor as a rule small groups of muscles, because, as Krehl points out, "We do not will a single muscle to contract, but we will a certain movement to take place," usually a co-ordinated one, requiring the use of many muscles. This could with equal truth be said of the interesting "astasia-abasia" of certain hysterical cases. The age of the patient, nine years, is an interesting feature of the case.

HYPERPYREXIA AND DEATH AFTER TONSILLOTOMY.

BY D. J. GIBB WISHART, M.D., TORONTO.

Senior Surgeon, Department of Oto-Laryngology, Toronto General Hospital,
Late Senior Surgeon, Department of Oto-Laryngology,
Hospital for Sick Children, Toronto.

A. R., female, aged 14 years, entered Hospital for Sick Children early in the morning of October 7th, 1908, complaining of persistent mouth breathing, defective hearing and frequent colds in the head. Had adenoids removed two years ago. Suffered from pleurisy last May, otherwise perfectly healthy. A swab had been taken from the throat the day previous, and reported free from K.L. bacilli. The patient is moderately nourished, and well developed. There is no glandular enlargement. The skin is cold and pale. The eyes, nose and ears are free from discharge. Bones and joints appear normal. The chest is symmetrical, expansion good, mammary glands show commencing development. Breath sounds vesicular, clear. Heart sounds clear, no accompaniment. Pulse of good volume and tension. Tongue clear, tonsils well enlarged, adenoids. Abdomen flat, soft, tympanitic, no rigidity, no tenderness. Spleen not palpable, liver not enlarged. Reflexes: Pupils react to L. & D., abdominal present, patellar active, plantar flexion, no ankle clonus.

The patient looked somewhat pale during the forenoon and was nauseated, at 12 p.m. she vomited. The gastric disturbance was attributed to calomel and mag. sulphate catharsis. At 1 p.m. the temperature was 99, and the pulse of fair quality. On examination the tonsils appeared smeared over with a glairy mucous pus, the crypts were probed and found filled with caseous debris. There was a suggestion of quinsy in the appearance of the pharynx, but no other clinical evidence. At 2 p.m. a general anesthetic, chloroform, was administered, and the tonsils and adenoids removed. She was not very fully anesthetised, but took a good deal of chloroform, and struggled a little. There was a moderate hemorrhage during the operation. When the tonsils were seized in the guillotine, a quantity of offensive cheesy debris exuded. During the next two hours she vomited about a pint of bloody fluid. The pulse was small in volume, and at 4.35 6 ozs. of a saline were administered per rectum. At 5 p.m. the temperature was 104. At 7 p.m. the temperature was 105, and she was cyanosed. She was carefully examined at this time and no cause discovered for the rise of temperature. There was then no bleeding, the skin was cold, and pulse running at 110, of small volume. Heat was applied to the extremities, and whiskey given per rectum with a saline.

Calcium lactate, gr. xx., was given to anticipate bleeding. At 1 p.m. the temperature was 105. She was still cyanosed. Strychnia sulphate, gr. 1-20, was administered, and the rectal saline with whiskey, 1-2 oz., repeated. Hydrotherapy was thought to be contra-indicated on account of the cold extremities. An intestinal saline with adrenalin was administered. At 11 p.m. the respirations were hollow and infrequent and atropine, gr. 1-100, was administered, with strychnine, gr. 1-60. A little later oxygen was administered cautiously; she showed some improvement in the lessening of cyanosis and restoration of the normal respiration. Heat had been applied to the extremities from the commencement. At 1 a.m. the temperature reached 106, and she was delirious at times. There was no complaint of pain, and she was conscious, but wandered a little. At 5 p.m. the temperature reached 107, the pulse was small, she was cyanosed, extremities cold and prostration marked; she became progressively weaker and died at 6.53 a.m.

Professor J. J. Mackenzie made the following report of the autopsy:

On opening abdomen, peritoneum is apparently normal, the mesenteric and posterior glands are markedly enlarged. On opening the thorax, lungs do not react, but meet in the middle line at third space. Heart space normal. Thymus at upper border of second rib, not enlarged; right plural cavity, no fluid, no adhesions; left plural cavity, no fluid, no adhesions. Pericardial cavity, normal amount of fluid. Left lung, pleura sticky in one or two places, small sub-pleural hemorrhages, lung crepitant throughout, but very emphysematous. On section lungs are of even consistence and apparently normal. Heart, pericardium normal, valve normal. Liver, dark in color, soft and friable, considerable fat and edema present, lobules indistinct. Kidneys, about normal in size, capsule strips with slight difficulty, on section cortex markedly striated, slightly swollen, shows possible yellow streaking. Spleen, fairly firm, capsule smooth, trabeculae not very firm, one small tubercular nodule found. Intestines, Peyer's patches and lymphoid follicles markedly swollen, in one or two places small ulcers were found. Mesenteric and retro-peritoneal glands swollen, and one gland being especially large, of the size of a large marble and caseated. Pelvic organs normal. Anatomical diagnosis, early intestinal tuberculous, with marked swelling of mesenteric and retroperitoneal glands, old tuberculosis with caseation of one gland, acute nephritis, emphysema of lungs, acute hepatitis.

The explanation of this case is one that I cannot fathom. That the debris from the tonsils could have been charged with a highly

toxic bacteria is possible, but why should the small quantity that was not removed with the tonsils and blood have caused so speedy a death from septicemia? In another later instance where the tonsils were similarly laden, the debris from the depths of the crypts revealed only staphylococci. I regret that I did not attempt serum treatment, but there was no time to attempt the isolation of the particular cocci present. Death was evidently due to a virulent toxemia, but why?

TUBERCULOSIS IN THE GENERAL HOSPITAL AND ITS RELATION TO THE MILK PROBLEM.

BY J. N. ELLIOTT BROWN, M.D.,

Superintendent Toronto General Hospital, Toronto.

During the last hospital year there were in the Toronto General Hospital 140 cases of tuberculosis of various sorts: 53 of these were pulmonary; 24 glandular (principally of the glands of the neck); 15 of the peritoneum; 10 of the spine; 7 of the meninges; 5 of the kidney; 5 of the hip and 21 of other portions of the body; 94 of these were cured or relieved, 15 not benefited, 19 died, and 12 still remained in the Hospital when the census was taken. This does not, of course, include the number of cases of latent tuberculosis—not showing any manifestations, or obsolescent tuberculosis.

According to Osler, 100% of those who die, if systematic laboratory investigation were made, would be found to have a tubercular lesion somewhere. As an actual fact, Naegelli found evidence of tuberculosis in 97% of 500 consecutive autopsies. During the year 1908, in seven of the largest children's hospitals in the old lands, there were 11,148 patients; of these 2,842 (about 25½%) were suffering from tuberculosis. Professor Von Behring of Germany and his students, after much study, have discovered that the chief source of tuberculosis in children is tubercular milk.

It is gratifying to know that the Provincial authorities have appointed a commission to investigate the milk question. During the past week or two, two of the leading Toronto dailies have taken up this question. This very afternoon a delegation from the commission of the Canadian Medical Association is visiting New York with one or two philanthropic citizens to see what is being done in that city in the way of supplying pure milk to the citizens.

A study of the milk supply in New York City showed that 16% of the cows were tubercular. In a recent examination made in New York State it was found that 25% of the milch cows were tubercular. In a splendid Jersey herd near this city, examination showed that 50% of the cows were tubercular. I believe, therefore, we may confidently infer that from 20 to 25% of the cows supplying milk to the city of Toronto are suffering from tuberculosis. This is an alarming state of affairs and should be remedied soon. The only immediate method to meet the exigencies of the case is to pasteurize the milk. By this I do not mean sterilizing the milk or boiling it, which harms it; but to subject it to a temperature of 150° F. for twenty minutes. This will destroy the germs of tuberculosis and of other diseases, and does not appreciably harm the milk—so authorities say. Of course, the proper thing to have done would be to see that the milk of no tubercular cow comes to the city. This can only be done by testing each of the thousands of cows from which milk comes with the tuberculin test—an impossible thing to carry out for years to come.

First, there is no legislative authority which will enable the citizens of Toronto to demand that these cows be tested in this way. Secondly, it is expensive; and thirdly, the milk-producer has not been educated up to the point of permitting this to be done for the health of the children of the consumer, and he cannot be forced to do it, as there is no statute providing for compulsory testing.

The importance of having this done may be seen from the following illustrations:

Brouardel reports that in a boarding school in which there were fourteen girls five contracted tuberculosis from milk supplied from a tubercular cow.

Woodhead found that in an institution to which milk was supplied from a herd in which three cows were suffering from tuberculosis the mortality from tuberculosis in the institution for the year preceding his report was 30% of the total mortality, and for the previous year 40%.

The daughter of Dr. Goss, a well-known physician of Geneva, spent every Sunday at her father's farm in the country, and partook freely of the fresh milk direct from the cows. She fell ill of tuberculosis and died at the end of ten months. The testing of the cattle showed that four of the five cows on the farm were tubercular and two of them when killed were found to have tuberculosis of the udder.

These are not pleasant stories to relate, nor do they make "nice" reading, but unless the importance of this question is

brought home to people by strong, if not startling evidence, little will be done in the way of reform.

In New York, where more active measures have been adopted perhaps than in any other city in this continent, the death rate from tuberculosis in children under fifteen years of age has increased 40%.

There is great encouragement in the work of stamping out tuberculosis. The report of the Registrar-General of England in 1838 showed that there were 59,000 deaths from tuberculosis, while in 1906 the same official report showed only 39,740 deaths.

This is, no doubt, due to the increased care that has been taken in the way of prevention. In addition, it is, no doubt, partly due to the increasing immunity which has developed in the present generation who have been exposed to the disease. We have contracted it in a mild and possibly undiscovered form, by which inoculation we have obtained immunity against further attacks, such as occurred a hundred years ago when protection against smallpox was obtained by artificial inoculation—a small dose of the vaccine producing a mild attack of the disease and thus protecting against future infection.

THE MORE IMPORTANT GERMS FOUND IN AURAL DISCHARGE, WITH SOME CLINICAL AND PATHOLOGICAL MANIFESTATIONS.

BY GILBERT ROYCE, B.A., M.B., TORONTO.

Of late years considerable attention has been paid to the study of the bacteriology of aural discharge, with the view of determining what relation existed between the various micro-organisms and certain clinical and pathological phenomena. Although considerable progress has been made towards establishing a direct relation, much yet remains to be done, for there are some forms whose action cannot be determined, occurring as they do almost invariably in association with other micro-organisms.

The admixture of germs that must necessarily occur in the discharge from the external auditory canal, has led many to view results from the examination with considerable doubt, and to look upon them as interesting from a scientific standpoint only; but, even should the mixture be especially luxuriant, a predominating

form can be very frequently found, which, should the case go on to operation owing to mastoid complication, will be found in almost pure culture in the bone.

The longer the duration of the discharge the more mixed the infection is likely to be, so that the examination is far more valuable in recent cases. It is possible to reduce considerably the variety by first irrigating the canal with sterilized water and making the smear from the pus, as it pours from the opening in the tympanic membrane.

In the New York Eye and Ear Infirmary it has been the rule for some years to make a microscopical examination of the discharge from the auditory canal of all recent cases on admission to the institution. Should the cases go on to operation on account of mastoid complications, smears are also taken from the mastoid pus. In only a small percentage of cases does the report of the examination of the discharge from the canal differ from that of the mastoid pus. To be explicit, should the report of aural pus designate streptococcus with mixed germs, meaning streptococcus predominating, almost invariably the report of mastoid pus designates streptococcus. This is borne out by a series of over five hundred reports which the writer looked over and by many smears which he had the opportunity of examining.

Although countless varieties of micro-organisms are present in aural discharge, it is the purpose of this paper to mention only a few of those, the clinical significance of which is established.

By far the most important germ is the streptococcus pyogenes, for this organism is found either alone or in association in almost all cases of a fulminant type. Cases showing this germ mixed with such germs as the pneumococcus, the staphylococcus, or the spirillum of Vincent exhibit especial malignancy.

Streptococcus infections are usually characterized by rapidity of onset, high fever, acute pain, marked local inflammatory action and often septic aspect in the subject. The discharge is thick and creamy, even from the commencement, and copious in amount. They seldom yield to abortive treatment, and either go on to operation or a chronic discharging ear results. The number of chronic discharging ears with a history of having commenced during childhood as the result of an attack of scarlet fever, shows the tenacity of this organism. It also shows its tendency to chronicity, a feature which is characteristic of it.

Its action on the mastoid is frequently evidenced by rapid and extensive bone involvement, leading to various complications, such as epidural abscess, perisinus abscess or sinus thrombosis.

Dench, some years ago, conducted a series of investigations regarding the efficiency of abortive treatment in various infections, and found that 86% of pure streptococcus cases came to operation; when mixed with other organisms, 90%. These were all acute cases.

Another form of streptococcus which has only of late years attracted attention is the streptococcus mucosus capsulatus. Dixon, the pathologist of the New York Eye and Ear Infirmary, some two years ago, drew the attention of the profession to the peculiar action of this organism, and the writer was able during his service at the above institution to observe a considerable number of cases in which this germ appeared to be the etiological factor.

As little can be found in any but the very recent text books on bacteriology concerning this form, it may be of interest to describe it in some detail.

It is a micrococcus that appears singly in pairs and chains bearing a capsule including the single coccus, and stains with all the usual aniline dyes, best, however, with dilute Ziehl, and is positive to Gram's method. It is non-motile and does not form spores. It is aerobic, facultative anaerobic, and does not grow well in all laboratory media. The media is not liquified. It grows best in Loeffler's solidified blood serum, and appears between 5 and 12 hours at 37° C. as a shiny, flat, transparent, viscid-looking growth.

Its cultivation is poor on other media. It is very pathogenic for rabbits. Inoculation in the peritoneal cavity causes death in twenty-four hours.

Its peculiarities from a clinical point of view may be gathered from the following observations:

Acute cases of purulent otitis media where the streptococcus capsulatus predominates generally do well provided an early and free incision of the drum is made. The same is true if complicated with mastoiditis, and early operation is resorted to, but every day after two weeks, provided the discharge continues unabated, is fraught with danger to the patient, no matter what the symptoms are, and in those cases existing six weeks or over, the germ still being present in the discharge, every case operated on has been found to have sustained remarkable bone destruction, and this, too, often in the face of the fact that the patient may present a normal pulse and temperature, be entirely free from pain and tenderness, and profess a feeling of well-being and improvement in hearing. The blood may or may not show high polymuclear percentage. In other words, given a case of acute purulent otitis media, complicated with mastoiditis, in which the germ is the streptococcus capsulatus, whether the acute symptoms subside or not, but the dis-

charge and germ persist for from two to four weeks, the mastoid will generally be found soft enough to be removed with a spoon. This will certainly be true after six weeks, and, in addition, the dura may be found exposed over a considerable area.

The above is the outcome of observations extending over a large number of cases. On account of this tendency to a latent process in neighboring structures, patients showing this variety of infection require careful watching after the cessation of the first symptoms. It may be noted here, too, that this form has been found with sufficient frequency in diabetic mastoids to attract attention. One of the most frequent forms found in aural discharge is the staphylococcus. It is not commonly found alone, being usually associated with other forms. Some observers claim that it only occurs as a secondary infection. However this may be, its association with such organisms as the streptococcus and pneumococcus seems to favor their action. Cases showing staphylococcus predominating in a mixed infection or alone, are generally mild in character and readily yield to ordinary measures of treatment. This might be expected from a consideration of its characteristically local action in other parts of the body, no tendency to spread being shown. In this it differs markedly from the streptococcus. In recent cases of staphylococcus infection the pus is often thin, mucoid and stringy in character, and should mastoiditis complicate, necessitating operative measures, considerable bone involvement is rare.

As to the importance of the pneumococcus as an etiological factor in the production of middle ear disease with its complications, there is some diversity of opinion. Recent investigations, however, seem to show that when it occurs in comparatively pure culture the cases are generally mild in character and do well under ordinary treatment, but when associated with the streptococcus unusual malignancy is exhibited.

Although many other organisms more or less important in connection with middle ear disease could be mentioned, the rôle they play as causative factors is not clear, therefore reference to them has been purposely avoided.

Medicine

GRAHAM CHAMBERS, R. J. DWYER, GOLDWIN HOWLAND, GEO. W.
ROSS, WM. D. YOUNG.

- (1) **Anterior Poliomyelitis.** H. KOPLIK. (2) **Early Symptoms of Anterior Poliomyelitis.** LA FETRA. (3) **Report of Five Cases of Anterior Poliomyelitis.** A. HYMANSON. *Archives of Pediatrics*, May, 1909.

These papers all have reference to the great epidemic of 1907 in New York, when 1,200 cases were reported to the Board of Health, and, according to Holt, 1,800 others were not notified. Koplik, finding no hygienic causes, states the epidemic to be a pure infection and considers that it may be of a different type than that commonly called Ant. Poliomyelitis (*Jacobi contra*). Three main types are described: (a) *The ordinary special type*, with the usual symptoms, namely, a mild febrile disturbance, followed by paralysis of one or more limbs, which rapidly show atrophy in certain groups of muscles. (b) A polyn neuritic type, which is characterized by pain in the limbs, frequently referred to the joints; gradual paralysis, and recovering generally in a few weeks time. The reflexes may be exaggerated and hyperesthesia be present. (c) The most serious form, the cerebrospinal or encephalitic type, which varies in its onset—sudden unconsciousness; preliminary febricula followed by sopor; early paralysis followed by sopor; headache; vomiting.

In severe cases of the epidemic the bulb may be affected and difficulty in deglutition and respiration occur, while the thoracic and abdominal muscles may suffer when lower neurones are attacked.

La Fetra very briefly describes a number of cases, in order to emphasize the variability of the symptoms of onset. Besides the ordinary signs, one may note those of unusual occurrence: rigidity of the neck; photophobia; pain and tenderness of the limbs; five cases with a spastic paralysis; facial paralysis; negative lumbar puncture; leucocytic blood counts 13,000—20,000. The diagnosis of these cases was evidently comparatively easy during the epidemic, but the question of a purely meningitic origin frequently

caused trouble at the onset and naturally cleared up as the case progressed; while the marked localization in cerebrum or peripheral nerves was evidently a source of difficulty in the cases presenting these types.

Hymanson also collates five cases with unusual symptoms in each, namely: facial paralysis; palatal paralysis; loss of sensation in arms and legs; respiratory paralysis.

One final point is of interest: the cases all disappeared with the onset of cold weather in October; especially as in Canada we frequently meet with acute multiple polyneuritis in winter following some infection, and in which the question of poliomyelitis or polyneuritis always occurs.

GOLDWIN HOWLAND.

Pathology and Public Health

JOHN A. AMYOT, O. R. MABEE, G. G. NASMITH.

On the Value of the Use of Ammonium Oxalate in Blood Culture Technique. C. RYTTENBERG. *Journal Med. Research*, Jan., 1909.

Since the increasing value of blood cultures as a diagnostic factor has become of importance, a method of taking blood samples and preventing their coagulation until sown on the various culture media has become necessary. Hitherto it has only been possible to handle these media in a hospital or other well-equipped laboratory, while the blood cultures must be taken at the bedside. C. R. has found that the addition of ammonium oxalate to the blood, while it prevents coagulation, does not in any way interfere with the growth of the organisms when transferred to the culture media. Three hundred and twenty-four cultures were taken in all, of which eighty-seven were positive; they comprised typhoid, pneumonia, post-partum infections, pyelitis, pyosalpinx, infective endocarditis, otitic infections, erysipelas, local infections, abscesses, gall-bladder infections, osteomyelitis of various bones, and glanders.

The writer, by removing this real difficulty in the technique, has greatly increased the value and ease of the blood culture method.

G. G. NASMITH.

Immunity Production by Inoculation of Increasing Numbers of Bacteria, Beginning with One Living Organism.

WEBB, WILLIAMS and BARBER. *Journal of Medical Research*, Jan., 1909.

Investigated the immunity produced in animals, guinea-pigs, rabbits and mice, by inoculating live anthrax and tubercle bacilli. With anthrax a degree of immunity could be obtained with anthrax grown on agar for twelve hours, but not against live organisms taken directly from the blood of an infected animal.

With tubercle bacilli the results are interesting: guinea-pigs were the animals used, but a remarkable variation of the natural immunity to tuberculosis was found to occur in the various animals.

In a single case twenty bacilli were found to produce tuberculosis; in most instances the number was several times greater. In cases where a small number of tubercle bacilli was injected larger numbers could be introduced after intervals of several days, until finally a total had been given which would almost invariably produce tuberculosis if given all at once. That is, there had been obtained a degree of immunity.

They then inoculated five tuberculous men with live tubercle bacilli, the inoculation being made in the arm or leg in such a way that successive new injections should be received just below the previous one. Two out of the five showed great benefit from the treatment, although they had been considered hopeless cases.

G. G. NASMITH.

Psychiatry

W. C. HERRIMAN, ERNEST JONES.

Neuropathic Wards in General Hospitals. CAMPBELL MEYERS.

The Canadian Journ. of Med. and Surg. April 1909, p. 209.

Dr. Meyers has here a short article on this important subject. Many of the points he makes are of great value and cannot be too widely recognized; others will command less general assent. To the former belong the prophylaxis of mental disorders from a neurological point of view, and the urgent necessity that cases of functional nervous diseases be treated in special departments and not in general medical wards. It is obvious that little can be done at present in prophylaxis, because those qualified to treat mental disorders, namely, psychiatrists, rarely have the opportunity of caring for the patients until the disease has reached an advanced stage. Such cases are usually placed under the care of physicians who have had no training in psychology and no experience in psychiatry, who therefore are not in a position to foretell the type of mental disorder that is developing or to understand what measures are of avail in averting this particular type. Dr. Meyers points out how unfortunate it is that such a chasm exists between the fields of alienation and general medicine, and it is clear that this chasm can be bridged only by those who are well versed in both neurology and psychiatry.

The second point made by Dr. Meyers is that cases of functional nervous diseases and borderland, or early cases of insanity (there is, of course, no sharp line between any of these groups) should be treated not in general medical wards, but in special departments where special methods of investigation and treatment may be adopted. This must commend itself to everyone who realizes how inadequate in every way is the present-day care of these unfortunate patients. Dr. Meyers goes on to insist that this department should be situated in a general hospital, and not in any psychiatric clinic. Everyone will agree that wherever this department is it should be in close touch with a general hospital; but we believe that the first-mentioned conclusion reached by Dr. Meyers is based on a misunderstanding on his part of the

functions and nature of a psychiatric clinic. The objections he raises are two. The first is that patients would not be brought to an institution containing insane. But no psychiatric clinic contains patients insane in the lay sense, for as patients in such a clinic are certified, and the institution is to the lay person one for "nervous" disorders. The second objection, that patients would be disturbed by the sight of the insane, is answered in the same way. No patient suffering from functional disorder would in a clinic be ever allowed to see an insane patient and would not even know of their existence in the building. The strictest classification of cases would be made and adhered to by physicians qualified to perform this. Of the numerous important advantages to be gained by making a less sharp distinction between the sane and insane nothing need be said here; many of them will at once occur to anyone who reflects on the matter.

ERNEST JONES.

The Origin of the Feeble-Minded. W. A. POTTS. *Birmingham Medical Review*, 1909; p. 121.

This paper is concerned chiefly with the question of inheritance in relation to feeble-mindedness. The writer passes some very timely strictures on the scandalously loose conceptions held by the medical profession on the subject of heredity. So impressed with this were the members of the recent Royal Commission on the Care and Control of the Feeble-Minded that they specially urged that teaching on the subject should be more emphasized in the medical curriculum than it now is. The writer, however, does not seem to have pushed his scepticism on the subject very far, for, after all, the conclusions he reaches are those generally believed in by the medical profession, as to the harmful action of parental alcoholism, syphilis and other agents on the germ cells. He quotes a remark of Karl Pearson's to the effect that a history of insanity can be obtained in any family if only it is carefully searched for, and says that the real point is whether such a history is commoner amongst the feeble-minded than amongst the healthy. The reviewer might add that this does not carry us very far in relation to the question of heredity, for even if it were proved that such a history is more often to be obtained with feeble-minded children than with others, the next question that would arise would be how far the upbringing of children by abnormal parents is operative in producing abnormalities in such children.

ERNEST JONES.

The Clarification of our Concepts Concerning Hysteria. TOM WILLIAMS. *Canadian Journal of Medicine and Surgery*, May, 1909; p. 278.

This article, which also appeared in *The Monthly Cyclopadia and Medical Bulletin* for March, 1909, although no acknowledgment is here made of the fact, is the sixth article on the subject that the author has published in the past few months. He seeks to expound Babinski's recent pronouncements, in which the definition of hysteria has been narrowed to cover a much smaller group of cases than was previously admitted. The definition turns on the power of removing the symptoms by persuasion—a single characteristic which happens to be true of a large number of symptoms, and hence is of little permanent value. Babinski does not pretend to study the actual pathogenesis or nature of the malady, but arbitrarily attempts to define it by the above touch-stone. The objections to this unscientific procedure are too numerous to be dealt with here, but it must be stated with all emphasis that anyone who attempts to generalize about hysteria in ignorance of the recent epoch-making work of the German school on the subject is not likely to arouse much interest amongst those qualified to judge.

ERNEST JONES.

Traumas of the Brain. SHELTON HORSLEY. *Gaillard's Southern Medicine*, 1909; p. 141.

The author calls attention to the fact that fractures of the skull are sometimes the means of averting serious injury to the brain substance, in that the force of the blow is expended on the bone and not on the brain. Haemorrhage from the middle meningeal artery may result from a blow that does not fracture the skull.

ERNEST JONES.

Paranoia. BEVERLEY TUCKER. *Gaillard's Southern Medicine*, 1909; p. 137.

This is an ordinary text-book account of paranoia cast in the form of a lecture. It contains nothing new. When the author says that two per cent. of the admissions to insane asylums suffer from paranoia, that can be regarded as true only by including under the term a number of cases that nowadays are classified under dementia paranoides. Indeed, he does not seem to distinguish between the

two conditions, for he says that "mental weakness comes toward the last," whereas this is supposed not to be so with true paranoia. He remarks on how frequently such cases are not recognized and emphasizes the importance of being able to make an early diagnosis and so prevent harm.

ERNEST JONES.

The Forensic Import of Psychic Epilepsy. S. P. GOODHART.
Medical Times, May, 1909; p. 143.

It is now well recognized that epilepsy may be manifested in the form of certain impulsive psychical disorders without any motor phenomena. These attacks are of great forensic importance, for they frequently seem to the layman to be deliberate pieces of conduct. Goodhart here shortly relates the following case: A man aged thirty-six had his first seizure in 1905. It consisted in the sudden occurrence of a sensation as if the calf of the left leg was swelling to enormous proportions. He made a violent effort to remove his shoe, called loudly for help, and then lost consciousness. He showed great violence and regained consciousness only six hours later. An exactly similar attack occurred seventeen days later and two others in 1906. There was marked and permanent hyperesthesia of the left calf. The case reads to the reviewer as if it were one of hysteria.

ERNEST JONES.

The Insane Diathesis. SANGER BROWN. *Journal of the American Medical Association*, May 8, 1909; p. 1469.

In these days, when so little scientific work is being done on the pathogenesis and etiology of insanity, there is ample opportunity for writers to descant on the subject free from all serious responsibility, and this opportunity is taken advantage of to the full. The above article recapitulates the banal "causes" of insanity—heredity, faulty education, etc., and the other matters of which we know so little. A graphic description is given of abnormal children who are liable to become insane. As the writer deals with insanity as a single entity, this description has as much value as that of an internist would have who gave a description of children who are liable to become ill.

ERNEST JONES.

Ophthalmology

D. N. MACLENNAN, W. H. LOWRY.

The Influence of the Sexual Organs on Affections of the Eye in Women. LLOYD OWEN, (D.C.) *Birmingham Medical Review.*

D. C. Lloyd Owen, in the Middleman lecture for 1908 at Birmingham, shows a relationship between eye diseases and the female organs of generation which easily might escape the ordinary observer. Referring to the observations of ancients, he states that Hippocrates mentions that puerperal fever may cause strabismus, blindness and deafness, and that others of the ancients record under the vague term amaurosis, the results of disorders of the menstrual function and diseases attending gestation.

The author refers to the aggravation of asthenopia, stromous forms of conjunctivitis, keratitis and blepharitis during the onset of puberty, and he believes connection between the two is brought about in one of the following ways:

1. By reflex action.
2. By alteration of the composition of the blood, which becomes charged with toxic products.
3. By disturbances of circulation, that is, by increase in the vascular tension.
4. By aggravation of some form of neurosis.
5. By enterogenic auto-intoxication, dependent upon digestive derangement, set up by menstruation.

He refers to a case of optic neuritis which showed repetitions of exacerbation at each period, and a case of exophthalmos due to orbital thrombosis, which became more pronounced during each menstrual period.

In connection with amenorrhea, or sudden suppression, he relates cases of optic neuritis followed by atrophy, cases with scotomata (blind-spots), cases of retinal and vitreous hemorrhage while in association with the menopause, he points out the aggravation of asthenopic symptoms, the obstinacy of cases of conjunc-

tivitis, episcleritis and irido-cystitis, and the occurrence of congestive glaucoma during this physiological process. The author is satisfied that he can trace a distinct connection between episcleritis and irido-cystitis, on the one hand, and menstrual disorder on the other.

In relation with pregnancy and the puerperium, he discusses cataract, hemeralopia, retrobulbar neuritis, scotomata, detachment of retina, and amblyopia, and points out that from data obtained by the use of the ophthalmoscope, the propriety of advising the induction of premature delivery may be considered. He also speaks of cases he has observed of acute metastatic ophthalmitis occurring with uterine infections.

The lecture is published in the *Birmingham Medical Review*, and is very readable and interesting. It will stimulate the reader to further observation along these lines. The subject is one in which there might be a tendency to establish an immoderate relation between diseases of the eye and disorders of the female genital organs, but the author very carefully refrains from such an error.

W. H. LOWRY.

Rhinology, Laryngology and Otology

GEOFFREY BOYD, GILBERT ROYCE.

The Importance of Early and Adequate Relief of Nasal Obstruction. CLAUDE D. CRANE, M.D., Brooklyn, N.Y. *International Journal of Surgery*, April, 1909.

The study of the physiology of normal nasal function demonstrates very clearly the evil effects of any departure therefrom. It is imperative that we bear in mind the all-important rôle which normal nasal function plays in the maintenance of health and in the prevention of disease. The admixture of the races, faculty development, growth of higher civilization, carrying with it congested population and pathogenic micro-organisms, as well as increased liability to injury, have resulted in abnormal nasal function and subsequent infection, demanding relief.

The entire area of the nasal cavities and accessory sinuses has been provided by nature with important physiological functions, and their preservation is dependent upon the maintenance of the normal anatomical relations and capacity and the normal histology of the parts.

The lymphatic connections between the ethmoid region and subdural and sub-arachnoid spaces, undoubtedly explain the cerebral symptoms, such as headache, depression, dizziness, etc., commonly attending ethmoidal disease, as well as affording free channels for brain infection. Free drainage by way of the nasal fossae is the safeguard, and the only one.

A careful study of the nerve supply affords ample explanation of many headaches and neuralgias, and establishes the sympathetic relationship between the upper and lower respiratory tracts, and accounts for asthma of nasal origin. Obstructive conditions in the nose, causing irritation of the terminal filaments of the sphenopalatine ganglion, act reflexively through the ganglion to the vagus, hence to the bronchial muscles, causing spasm or asthma. It is not to be inferred that all cases of bronchial asthma belong to this class.

The olfactory function of the nose is highly important, being limited to the mucous membrane covering the upper part of the superior turbinate, and corresponding part of the septum. This

function augments the appetite and adds much to the enjoyment of food. It also gives us due warning of unhealthy conditions of the atmosphere and unhealthy foods. If there is obstruction interfering with the free access of air or causing inflammatory changes in the mucous membrane, we have loss of smell.

The phonatory function of the nose is important, a free nasal passage being necessary for proper articulation in speech.

The respiratory function of the nose is, of course, the most important of its functions. In inspiration there is a slightly negative pressure which tends to promote the absorption of heat and moisture from the nose by the air. The inspired air is warmed to about the body temperature, regardless of its temperature before entering the nasal cavities. By the time it reaches the larynx it is equal to the body temperature.

Month-inspired air, being cold, irritates the lower tract and the endothelium of the air vesicles, predisposing to, and acting as an active factor in pulmonary disease. It is only when the air passes through the nose that it acquires the proper degree of moisture and temperature for the interchange of gases in the vesicles of the lungs. It must be accepted, therefore, that nasal respiration is essential to the physiological interchange of oxygen and carbon dioxide. If its free performance is interfered with we have all the evil effects of deficient oxygenation of the tissues.

In addition the nasal cavities functionate as a filter, preventing invasion of foreign particles and even bacteria. Coarse particles are arrested by the vibrissae. Minute particles and bacteria become enmeshed in the mucosa.

The accumulation of secretions, which occurs in nasal obstruction, forms an ideal culture field for growth and propagation of pathogenic bacteria. These collected secretions and discharges, filled with active pathogenic and non-pathogenic bacteria, are often swallowed, especially at night, and bring about disturbances of the stomach and intestines.

The evil effects of obstruction depend upon the particular form, degree and location of it.

Obstructive conditions near the entrance of the nose not only block the air current, but create a negative pressure in behind by the expansion of the lungs, which leads to a partial vacuum. This gives rise to hyperemia of the mucous membrane lining the nose and accessory sinuses. Following the hyperemia we have an exudation of serum, forming a rhinitis of intumescent type. This, in turn, if not relieved, leads to hyperplastic rhinitis.

Obstruction higher up prevents drainage of accessory sinuses. There is also the same sequence of hyperemia, exudation, chronic

thickening, accumulation of secretions, growth of bacteria, supuration of the mucous membrane of the nose, and accessory sinuses, and systemic infection.

Obstructions situated in the middle turbinate region are more serious than when below. Retained secretions collect, decompose and irritate the mucous membrane, causing discharge of irritating material. This, flowing over the mucous membrane below, causes inflammatory reaction, and, in time, atrophy.

Adenoid enlargement is an active factor in causing nasal stenosis, and may act in several ways. It may give rise to inflammation, and even infection of the sinuses. It may interfere secondarily with the drainage and ventilation of the sinuses. By leading to mouth-breathing, the adenoids may become a factor in mal-development. It may be mentioned also that nasal stenosis may primarily be an active factor in adenoid enlargement.

Some of the results or symptoms not previously touched upon are: Increased liability to colds in the head, or acute rhinitis. Mechanical results attendant on mouth-breathing, such as mal-development of the bones of the face; deformities of the chest; all the evils resulting from deficient oxygenation and accumulation of carbon dioxide, such as headache, anemia, mental apathy, loss of appetite, etc. Extension of inflammation through the eustachian tubes to the middle ear, deafness, or chronic catarrh of the middle ear. So-called post-nasal, or catarrh with the result of dropping mucus into the throat. Various neuroses of nasal origin, sneezing, hay fever, asthma, cough, nasal hydrorrhea, reflex neuralgia, etc.

In regard to the particular method to be employed in the removal of the obstruction, I will merely state that the principle involved in the submucous resection operation should be adopted whenever possible. One should select the operation which will do the least damage to the intra-nasal structures, and also be adequate in its results. Unnecessary removal of tissue should be carefully avoided. The operation which leaves the smallest wound is the one most desirable.

GILBERT ROYCE.

Genito-Urinary Surgery

T. B. RICHARDSON, W. WARNER JONES.

Prostatic Abscess. SAMUEL ALEXANDER. *Annals of Surgery*, April, 1909.

In a most interesting paper on this subject, Professor Samuel Alexander, of New York (Professor of Clinical Surgery, Cornell University Medical College, etc.), gives some very interesting statistics of a series of 68 cases treated at Bellevue Hospital during the years 1905-1908. The treatment followed was either median perineal section and drainage of the abscess into the urethra, or by median perineal prostatectomy. In Table I, he reports 26 cases treated by the former method, and 42 by the latter. Table II, shows three-fourths of the patients to have been under thirty years of age. Table III, shows that the prostatic abscess occurred in nearly half of the cases during the first attack of gonorrhoeal urethritis; while something over one-third of the cases gave a history of relapsing urethral discharge.

Table IV, demonstrates that prostatic abscess was associated with perineal abscess in 16 of the series, and with ischiorectal abscess in 5 cases. In Table V, urethral stricture was shown to be present (in a marked degree) in 9 cases, but there was a very large number of cases showing a congenitally narrow external urethral meatus necessitating meatotomy. Prof. Alexander says: "I believe that the imperfect drainage of the urethra caused by this defect may play a not unimportant rôle in causing many of the complications incident to gonorrhoea."

Table VI, shows that of this series of cases, 45 were confined within the prostatic capsule, and in 22 there was periprostatic suppuration. He further notes that a number of the patients had acute epididymitis at the time of admission, and indeed the prostatic condition had been quite overlooked.

Lastly, in Table VII., it is shown that more than 50 per cent. of the cases had retention of urine which was progressive in its onset.

Prof. Alexander thinks the median incision and drainage will be the operation of choice in certain selected cases—notably where

there is a single focus. In the cases of multiple abscesses—by far the more numerous—median prostatectomy is better. He is convinced that prostatic abscess, as a result of gonorrheal infection, is much more common than is usually supposed. "The symptoms in many of these cases were not in accord with those often described as accompanying prostatic suppuration, and in some cases the existence of abscess might have been overlooked, but for the physical examination." He thinks these methods of treatment are bound to supersede the methods of "urethral dilatation and massage of the gland."

T. B. RICHARDSON.

The Significance of Hematuria in the Diagnosis of Urinary Diseases. B. J. WARD, in the *Birmingham Medical Review*.

He says in part: Certain rules have been made to help in making a diagnosis. These are based on:

- A. The color of the urine.
- B. The time at which the blood appears in the stream.
- C. The shape of the clots.

He discusses these *seriatim*:

- A. The color of the urine.

1. "The brighter and more arterial the color of the urine the nearer to the meatus is the source of bleeding. This, to a large extent, is correct."

2. The darker and more diffused the blood is, the more likely it is to have come from kidneys. This rule, he says, is fallacious, since the dark color is due to the action of the urine on the hemoglobin of the blood. Hence any blood which remains in the bladder for a time would be so altered.

Smoky urine does not necessarily come from kidneys. Blood from any source that has leaked slowly into the bladder would be smoky, *i.e.*, it means a small amount of blood mixed with a large amount of urine. This may occur with a villous growth of the bladder.

- B. The time at which the blood appears in the stream.

1. Blood appearing at the end of clear micturition points to vesical or prostatic origin. This rule is reliable.

2. Blood appearing at the commencement of micturition is of a prostatic origin. This is in the main true.

3. Blood issuing from the urethra between the times of urination means a bleeding of urethral origin. This is self-evident and reliable.

4. Blood evenly distributed throughout the whole of urination comes from the kidney. This is not always correct as sometimes bladder bleeding may produce same result.

C. The shape of the clot. Long, worm-like clots point to kidney origin, pelvis, or ureter.

Microscopic examination of urine. Blood casts are of kidney origin. Bilharzia ova generally come from bladder.

The relation between the amount of blood and the albumin present. "Newman, of Glasgow, long ago pointed out that when there is present an excess of albumin over the proportion of 1.6 to 1, of hemoglobin, there is an independent albuminuria, which points to a renal affection as the cause of the hematuria. Practically it requires a very deep coloration with blood to give more than a light cloud of albumin.

The hematuria may be divided into two classes:

A. Hematuria with other symptoms.

B. Hematuria without other symptoms.

A. Hematuria with other symptoms, if renal colic is present that will aid in diagnosis. But kidney bleeding may cause pain and irritability of the bladder.

Hematuria with pain. Renal pain occurs at two sites, anterior and posterior, and may be fixed or colicky. If posterior, it is located in angle between last rib and erector spinae.

The anterior spot is just below the costal margin and above level of umbilicus.

Ureteric pain is at any point along a line drawn from the anterior renal spot to the external abdominal ring, and may be fixed or radiate to testicle or down thigh.

Bladder pain is of two kinds. Pain of a distended bladder is suprapubic. Pain of an inflamed bladder is felt at end of penis after urination. Prostatic pain is in perineum or rectum, or at base of sacrum.

Pain of an inflamed prostatic urethra is referred to tip of penis.

The site of the pain is not always reliable. He cites the case of a patient with profuse hematuria and pain in origin of kidney. It was decided to explore the kidney, but cystoscopic examination revealed the presence of malignant disease involving the mouth of the ureter on same side as the kidney pain.

The symptoms of urinary disease are so frequently abstruse and contradictory that he urges the great value of cystoscopic examination.

No kidney operation should be undertaken without first having made a careful cystoscopic examination.

The use of the catheter cystoscope will reveal the condition of the other kidney. He quotes Harry Fenwick as to the importance of cystoscopy:

"After obtaining some experience with the cystoscope I collected some of my obscure cases of hematuria, cases over which I had spent much time and on each of which I had pronounced a definite opinion. To my chagrin, I often found that my diagnosis was wide of the mark. Here is a list of ten, which I could multiply many times:

PRECYSTOSCOPIC EXAMINATION.	CYSTOSCOPIC DIAGNOSIS.
Villous growth of bladder.	Localized cystitis.
Villous growth of bladder.	Renal carcinoma.
Vesical growth.	Localized cystitis.
Villous growth of bladder.	Renal bleeding.
Vesical bleeding.	Renal bleeding.
Growth of bladder.	Tuberculosis.
Prostatitis.	Encysted stone.
Villous growth of bladder.	Localized cystitis.
Prostatic.	Ulceration of bladder.
Stone.	Tubercle."

As he says, "This is surely a humiliating table."

W. WARNER JONES.

Reviews

The Psychology of Dementia Precox. By C. G. JUNG. Authorized translation, with an introduction by Frederick Peterson and A. A. Brill. *Journal of Nervous and Mental Disease*, Monograph Series, No. 3. New York, 1909. \$2.00.

There have been valuable and interesting books and monographs written at different times in English on the subject of mental disease, treating of the various clinical types seen, of the relation of them to the law and to the public, etc., etc. But on the subject of scientific psychiatry, properly so-called, the new science that is not yet twenty years old, there cannot be said to exist any work except in Germany, the country which has been up to the present not merely the pioneer, but the monopolizer of the subject. Therefore the translation of any German work on psychiatry is always a great event for English-speaking alienists. When, however, that work is one which has by its novelty created a sensation even in Germany, and is widely considered to usher in a new era in psychiatry, then criticism on our part is less seemly than humble thankfulness.

The book in question is, therefore, to be warmly recommended on that ground alone. It has, however, another claim to special interest, for it is the first work to appear in English in which any account is given of the researches of the Freud school which have so revolutionized our ideas of the psychoneuroses and psychology in general. In a non-technical journal like the present one it would be out of place to enter into a discussion or even a description of the new theories developed in the present volume. The reviewer can, therefore, only state in the most unqualified way that no one can pretend to more than a speaking acquaintance with the subject of the psychology of dementia precox who has not studied Jung's work in detail, and, further, that he has from personal experience fully convinced himself of the truth of the views upheld by Jung, startling as they may at first sight appear. It should further be mentioned that even to those who are not directly concerned with the subject of dementia precox the book will prove of high interest, if only for the excellent chapters on hysteria, which is here contrasted with dementia precox in a most penetrating and suggestive way.

The translation of the book must have been a task of exceptional difficulty on account both of the new words that have been coined to express new thoughts and of the amount of colloquial German in the patients' utterances, which have had to be rendered in such a way as to explain the play on words that is so common in this disease. The translators, who have both enjoyed the privilege of studying under Jung at Zurich, must, therefore, be heartily congratulated on the way in which they have performed that task. They have added a valuable introduction, which is very necessary to those who are not acquainted with the new tendencies in psychopathology.

E. J.

The Pocket Prescriber. By JAMES BURNET, M.A., M.D., M.R.C.P.E.,
Fellow of the Royal Society of Medicine. Price one shilling.
Edinburgh. John Currie.

For the student of medicine this little vest pocket book will be handy for acquiring a slight knowledge of prescriptions and prescribing. In this country not many of us would wish or care to carry a prescription book in our pockets.

G. E.

Constipation and Intestinal Obstruction. By SAMUEL GOODWIN GANT, M.D., LL.D., Professor of Diseases of the Rectum and Anus in the New York Post-Graduate Medical School and Hospital, &c., &c. Philadelphia and London, W. B. Saunders Company; Canadian Agents: J. A. Carveth & Co., Toronto.

A new work on constipation and intestinal obstruction, by Professor Samuel Gant, has made its appearance. The publishers are W. B. Saunders Company, Philadelphia. The illustrations are clear, and many of them are original. The subject-matter is first-class. New methods of treatment are discussed. The descriptions of surgical operations are lucid. The book is well worth reading, and is one out of the ordinary.

W. J. O. M.

The Show Girl. By MAX PEMBERTON. Cassell & Co., Limited.
London, New York, and Toronto (42 Adelaide Street West).

A connected narrative, in correspondence form, mostly conversational in style, makes this book run out of the ordinary grooves

of this class of literature. The author maintains interest and expectancy throughout. It is a racy story of a young Englishman, Henry Gastonard, ostensibly in Paris studying sculpture, but really living a rather Bohemian life. A circus or show girl attracts his attention and leads to much correspondence between him and his bosom friend, Paddy, domiciled, of course, in Ireland, playing golf between drinks. Happily Henry's affections have not been misplaced, for in time the virtuous beauty of the footlights turns out to be a young lady of noble birth. After several mishaps true love runs smoothly along, and they are left in the enjoyment of their wedded bliss. A vein of quiet humor, as well as some nice turnings of diction, run throughout the story.

G. E.

The Rectum: Its Diseases and Developmental Defects. By SIR CHARLES B. HALL, Regius Professor of Surgery in the University of Dublin, Surgeon to Sir Patrick Dun's Hospital, Hon. Surgeon to the King. London: Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Square, E.C. Toronto: D. T. McAvish & Co.

This is a work of exceptional merit, and reflects great credit upon its distinguished author. It is a most valuable addition to surgical literature, and will be appreciated by surgeons everywhere as an authoritative presentment of this branch of surgery. It is eminently practical, beautifully illustrated, and most instructive. No surgeon can afford to be without this work.

H. A. B.

A System of Ophthalmic Therapeutics. Edited and chiefly written by CASEY A. WOOD, M.D., C.M., D.C.L. Chicago: The Cleveland Press.

This is a book comprised of some eight hundred and fifty pages, dealing with the non-operative treatment of diseases of the eyes, including prophylaxis. In carefully reviewing the pages of this volume, the reader is at once struck by the vast amount of labor which the work entailed, and also by the thoroughness with which each contributor has performed his task. One can hardly imagine that so much could be written on this subject, and yet each chapter is of interest, not only to the specialist, but to the

general practitioner. The opening chapters are devoted to ophthalmic therapeutics, including the remedies used in early days. It is difficult to believe that an intelligent human being could use some of these vile concoctions. Electricity in relation to diseases of the eye is dealt with fully. The chapters devoted to the examination of the eyes of school children and to railroad employes and sailors is of value and interest not only to the ophthalmic surgeon, but to the public at large. Several of the following chapters should be a great boon to the general practitioner, as they relate to certain systemic conditions, and also to lesions of neighboring cavities, where eye symptoms are involved. The remainder of the book is mainly taken up with a description of the lesions and the treatment of the individual structures of the eye. Ocular hygiene, errors of refraction, and ocular headache are important subjects which have received due consideration. The authors must be congratulated on the comprehensive and instructive result of their labors. The work should be in the hands of every specialist and also every up-to-date physician.

D. N. M.

Dominion Medical Monthly

And Ontario Medical Journal

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Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 203 Beverley St., Toronto, Canada

VOL. XXXII.

TORONTO, JUNE, 1909.

No. 6.

COMMENT FROM MONTH TO MONTH.

A Bureau of Health for Canada has been urged upon the Federal Government since 1902 by the Canadian Medical Association. This would mean the consolidation of the medical services of the Departments of Agriculture, Inland Revenue, Immigration and Indian Affairs, and Marine into one bureau, under one of the existing members of the Crown, with a medical man of advanced knowledge in public health as Deputy Minister. This could then be developed and extended. Practically the reply of the Government has been that, while recognizing its feasibility, there are difficulties in the way, probably the reluctance on the part of Deputy Ministers in giving up some of their patronage to another. The assurance, however, on the part of the Prime Minister, "that it was only by knocking at the door that the door would be eventually opened," should stimulate the Canadian Medical Association to press the project. It will be interesting and encouraging to know that President Taft favors a Minister of Health for the United States, going somewhat further than ex-President Roosevelt, who only favored a bureau. The medical services of the United States are, as in Canada, distributed amongst four separate depart-

ments. In the Treasury is operated the Bureau of Public Health and Marine Hospital Service; under Commerce and Labor, isolation and other phases of treatment of contagious diseases in connection with immigration; under the War Department, the sanitation and preventive work of Panama and the Philippines; under Agriculture, the Bureau of Chemistry and its food inspection. In asking Surgeon-General Walter Wyman, of the Public Health and Marine Hospital Service, to draw up a tentative plan for the consolidation of these medical services to be administered under one bureau, President Taft has made the most important move thus far of his administration. The Canadian Government is about to create a Department of Labor; and the Canadian Medical Association should again at an early date urge this matter upon the attention of the Federal Government. Surely matters of public health are of far greater importance than matters of labor!

The Canadian Medical Association has been incorporated by Act of Parliament. The following is a copy of the bill, which was promoted by the Committee on Legislation, named herein:

Whereas, Adam T. Shillington, Robert Wynyard Powell, Frederick Montizambert, Henry Beaumont Small, and John D. Courtenay, all of the city of Ottawa, in the Province of Ontario, physicians, have by their petition on behalf of the unincorporated society known as "The Canadian Medical Association," prayed that it be enacted as hereinafter set forth, and it is expedient to grant the prayer of the said petition: Therefore, His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. The said Adam T. Shillington, Robert Wynyard Powell, Frederick Montizambert, Henry Beaumont Small, and John D. Courtenay, and all other members of the said present unincorporated society, together with such other persons as become members of the corporation, are hereby constituted a corporation under the name of "The Canadian Medical Association," hereinafter called "the Association."

2. The objects of the Association shall be the promotion of the medical and allied sciences, and the maintenance of the honour and interests of the medical profession, by the aid of all or any of the following:—

(a) Periodical meetings of the members of the Association, and of the medical profession generally, in different parts of Canada or elsewhere.

(b) The publication of such information as may be thought

desirable in the form of a periodical journal, which shall be the journal of the Association.

(c) The occasional publication of transactions or other papers.

(d) The grant of sums of money out of the funds of the Association for the promotion of the medical and allied sciences in such manner as may from time to time be determined.

(e) And such other lawful things as are incidental or conducive to the attainment of the above objects.

3. The Association may make such by-laws and rules, not contrary to law or to the provisions of this Act, as it may deem necessary for the government and management of its business and affairs, and especially with respect to the qualification, classification, admission and expulsion of members, the fees and dues which it may deem advisable to impose, and the number, constitution, powers, and duties of its executive council, or other governing or managing committee, and of its officers, and may from time to time alter or repeal all or any of such by-laws and rules as it may see fit.

4. Until altered or repealed in accordance with the provisions thereof, the existing constitution, by-laws and rules of the said unincorporated society, in so far as they are not contrary to law or to the provisions of this Act, shall be the constitution, by-laws and rules of the Association.

5. The present executive council and other officers of the said unincorporated society shall continue to be the executive council and officers of the Association until replaced by others in accordance with the constitution, by-laws and regulations aforesaid.

6. No member of the Association shall, merely by reason of such membership, be or become personally liable for any of its debts or obligations.

7. The Association may receive, acquire, accept, and hold real and personal property by gift, purchase, legacy, lease, or otherwise, for the purpose of the Association, and may sell, lease, invest or otherwise dispose thereof in such manner as it may deem advisable for such purposes: provided, however, that the annual value of the real estate held by the Association shall not exceed the sum of fifty thousand dollars.

News Items

DR. JAMES BELL, Montreal, is in Philadelphia.

DR. W. W. CHIPMAN, Montreal, has returned from Europe.

DR. CHAS. E. MARTIN, Montreal, has returned from Europe.

DR. GEO. W. BROWN, Port Arthur, Ont., is visiting in Toronto.

DR. J. L. DAY, Montreal, has gone to Europe for three months.

DR. DYER has been appointed assistant medical health officer, Vancouver, B.C.

DR. P. H. BRUCE, Ottawa, is making his annual inspection trip to the Pacific coast.

DR. W. IVAN SENKLER, Vancouver, is said to be seriously ill in Portland, Oregon.

DR. ERNEST BROWN, Montreal, has gone to England and Europe for several months.

DR. A. R. PYNE, Toronto, has been appointed chairman of the Ontario Milk Commission.

MONTREAL will shortly establish a hospital for the care of advanced cases of tuberculosis.

A BRANCH of the Canadian Association for the Prevention of Tuberculosis has been organized in Toronto.

DR. J. R. GOODALL, after doing two years' graduate work in Europe, has sailed from Naples for Montreal.

A CHAIR of Chemistry is to be established in McGill University, Montreal, in memory of the late Professor Harrington. Sixty thousand dollars has been guaranteed by the committee in charge of same.

DR. AND MRS. E. W. ARCHIBALD, Montreal, have sailed for Naples, and will spend some months in Europe.

OUT of 950 deaths in Prince Edward Island during the year ending 31st May, 1908, 142 were due to tuberculosis.

DR. J. B. LEATHES, F.R.C.S., London, Eng., has been appointed Professor of Chemical Pathology in Toronto University.

DR. THOS. WALKER, St. John, is visiting New York and Boston, looking into latest methods of caring for the tuberculous.

GRACE and Western Hospitals, Toronto, are to amalgamate. A new Western Hospital will be erected at a cost of \$150,000.

DR. JAMES SAMPSON, Windsor, Ont., has been appointed chief lecturer on "old age pensions," by the Federal Government.

THE Salvation Army has established a Woman's Hospital, Bloor Street East, Toronto, and are about to establish another in Montreal.

DR. ROBICHAUD, Montreal, has resigned the superintendency of the Hotel Dieu Hospital, and has been succeeded by Dr. G. H. Baril.

DR. H. H. McINTOSH has resigned the superintendency of the General Hospital, Vancouver, and has been succeeded by Dr. Whitelaw.

DR. JOHN J. CRONIN is conducting a lecture and laboratory course in School Hygiene and Sanitation at the New York Post-Graduate Medical School.

DR. ADAM H. WRIGHT, Toronto, is to deliver an address on obstetrics before the Section on Obstetrics at the Canadian Medical Association, Winnipeg, August 23rd to 25th.

DR. W. A. YOUNG, Toronto, managing editor of the *Canadian Journal of Medicine and Surgery*, accompanied by Mrs. Young, has gone on a three months' trip to Europe.

A TUBERCULOSIS institute has received a charter of incorporation in Montreal. Drs. Roddick, Adami, and E. P. Lachapelle are vice-presidents; Sir George Drimmond, president.

DR. ARTHUR W. MAYBERRY, 569 Spadina Avenue, sails by the S.S. "Laurentie" June 19th. He will visit several of the leading throat and ear clinics in Great Britain and on the Continent.

A SERIES of Saturday clinics have been established at the Toronto General Hospital. Every Saturday at 10.30 some member of the staff shows a number of cases. These clinics are open to the profession.

DRS. C. J. C. O. HASTINGS, John A. Amyot, and Charles A. Hodgetts accompanied Mr. John Ross Robertson and Miss Brent, of the Hospital for Sick Children, Toronto, to New York, recently, investigating the subject of pasteurization of milk.

PHOTOS and photographs of cases may be had through Mr. J. T. Leatherdale, 350 Yonge Street, Toronto, who has recently succeeded to the Fraser Bryce Studio, long known in Toronto as one of the very finest artistic studios in this city. Mr. Leatherdale's advertisement appears in this issue.

REPRESENTATIVES of the Carnegie Foundation Association and the American Medical Association recently visited McGill University. McGill is bracketed with Harvard and Johns Hopkins as having the finest scientific equipment on this continent. Its hygienic laboratory is the very finest of its kind in North America.

MR. JOHN ROSS ROBERTSON gave a luncheon in the National Club, Toronto, on Tuesday, the 25th May, to Dr. Green, of the Nathan Strauss Milk Laboratory, New York. Several Toronto members of the profession were invited to meet Dr. Green, and informally discuss the milk problem, including Mr. I. H. Cameron, Drs. H. Crawford Scadding, J. N. E. Brown, H. T. Machell, C. J. C. O. Hastings, John A. Amyot, Chas. A. Hodgetts, J. T. Fotheringham, George Elliott, and W. B. Thistle.

Publishers' Department

SUMMER-TIME IS SPRAIN-TIME.—Some wit has said that "Summer-time is sprain-time." Golf, tennis, baseball and the other outdoor sports inaugurate a season of sprains and wrenches, and ankles, knees, wrists, elbows, shoulders and backs pay the penalty of a missed drive, an overhand smash or a slide to base. The resultant conditions, the stretching or tearing of ligaments, contusion of the synovial membrane, and damage to vessels and nerves, are best remedied by the use of Antiphlogistine, which markedly aids in the reconstruction of the injured part. By removing the products of inflammation, through the absorption of the liquid exudate from the swollen tissues, and by permitting free circulation of blood through the seat of the injury, Antiphlogistine acts as nature's first assistant. The affected cells are stimulated and toned up through endosmosis, and the process of repair is greatly hastened. Antiphlogistine should always be applied directly to the affected area as hot as can be comfortably borne, and covered with absorbent cotton and a bandage.

DUNCAN, FLOCKHART & Co.'s CAPSULES.—Capsules Formate Comp., No. 342 (Duncan)—Sodium Formate, 2 grs.; Potass. Formate, 2 grs.; Quinine Formate, 1 gr.; Strych. Formate, 1-50 gr.; Calcium Formate, 3 grs. Dose—One or two capsules three times a day, followed by a copious drink of water. In compact form and one suitable for prescribing as a general and powerful muscular tonic, the Capsules of the Formates are extremely convenient. These capsules contain, in addition to the usual salts of the formates, 1 grain of quinine formate and 1-50 grain of strychnine formate. This form of administering the formates is one largely in vogue for increasing tone in those who go in for physical exertion, such as athletes and men who are very actively engaged, who are merely run down and not suffering from any illness, but require a sharp tonic. They are also useful in the treatment of chronic rheumatism. Mr. R. L. Gibson, 88 Wellington W., Toronto.

RECONSTRUCTIVE TONIC IN NERVOUS CONDITIONS.—From a concise study of the causation and nature of nervous conditions clinical experience proves that it is not only possible to relieve most of

the symptoms, but in many cases to institute that radical change which results in the arrest of the diseased processes. The clinical symptoms of diseases of the nervous system result, in most instances, from changes structurally in the nerves themselves. These structural changes are, for the most part, disintegrative ones, and are, in every instance, due to an impoverished blood supply, resulting in mal-nutrition. When the integrity of the nervous system is impaired by diseases of any kind it has been observed clinically that it is preceded by a mal-nutrition and anemia. Therefore, the profession now agree, after many years of clinical experience, that the remedy most indicated in this class of cases is one which will supply complete nutrition. In Bovinine we have an ideal reconstructive tonic and food for all diseased conditions or nervous states arising from disease. Bovinine offers by far the best means of conveying, in the proper proportions, to the tissues, full nutrition. Furthermore, Bovinine is possessed of unquestioned physiologic properties. A perusal of the analysis of Bovinine and a study of its ingredients will show it to be a most valuable reconstructive tonic and food for the nervous system, and will at once suggest its wide range of action as a rational and scientific food in all of the functional and organic diseases of the nervous system.

UTERO-VAGINAL CATARRH.—During the past two years I have experimented with Glyco-Thymoline in the treatment of some of the catarrhal conditions which affect the female genitalia. The splendid results which I obtained on the naso-pharyngeal mucous surfaces led me to try it on other mucous surfaces where the conditions were substantially the same. Actual clinical experience has proven to my satisfaction that in Glyco-Thymoline the practitioner has at his disposal a remedial agent which in my opinion is unquestionably superior to the topical applications which I formerly employed. Without fear of contradiction I can say it is by far the best deodorant ever put in a purulent vagina. Under its influence the character of the discharge is rapidly altered and that comfort, relief and freedom from malodor which is of so much importance to the female patient, is secured. Glyco-Thymoline, by reason of its peculiar composition, produces the rapid depletion so desirable, cleanses the surfaces and maintains an aseptic condition of the parts. As an irrigation for the uterus and vagina, solutions of 10 per cent. to 25 per cent. are most desirable. When the uterus is highly congested an intrauterine irrigation of pure Glyco-Thymoline will produce wonderfully

For COUGHS and
THROAT IRRITATION

PINOCODEINE

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Each fluid drachm contains :—Codeine phosphate $\frac{1}{8}$ gr. combined
with Pinus Strobus, Prunus Virginiana, Sanguinaria
Canadensis, Populus Balsamifera and Chloroform.

As a routine expectorant, it is the same reliable product
that has had the support of the profession
for the past eight years.

**STOPS COUGHING,
ALLAYS IRRITATION,
ASSISTS EXPECTORATION**

Perfectly safe with patients of any age.

For GRADUAL or
SUDDEN HEART FAILURE

Elixir Digitalin Co. “Frosst”

Each fluid drachm contains :—Digitalin 1-100 gr.
Nitroglycerine 1-100 gr. Strychnine 1-50 gr.

The original product that has created the demand for this
energetic stimulant.

**CHARLES E. FROSST & CO.
MONTREAL, CANADA**

good results. When I use tampons pure Glyco-Thymoline produces the best results.

Case I.—Miss R., profuse leucorrhea (idiopathic). She was very miserable and "run down," very nervous, severe pain in back; cervix congested; discharge was acrid and excoriating. Treatment: Ordered hot douches (110 deg.) twice daily, medicated with Glyco-Thymoline, two ounces to quart, and put the patient on constitutional remedies. This treatment was persisted in for two months, when she was discharged cured.

Case II.—Ulceration of Cervix. This patient had been treated with boro-glycerine, iodine, ichthyol, etc., but without much benefit. Resolved to try Glyco-Thymoline, which I accordingly did. Tamponed with lamb's wool saturated with pure Glyco-Thymoline, which was allowed to remain for twenty-four hours. On removal a hot douche of 10 per cent. solution of Glyco-Thymoline was given and tampon again introduced. This treatment was given for three weeks, when the patient was discharged cured.—*Louis P. Reiman, M.D., Phila., Pa.*

ANTISEPSIS OF THE INTESTINAL CANAL.—The griping pain and flatulence which accompany bowel and stomach complaints, particularly during the heated term, are so readily overcome and controlled by the timely administration of one or two Antikamnia and Salol Tablets, repeated every two or three hours, that it behooves us to call our readers' attention to the grand efficacy of this well-known remedy in these conditions. The above doses are, of course, those for adults. Children should be given one-fourth tablet for each five years of age. When the attack is very severe, or when the disturbance is evidenced at or near the time of the menstrual period, we find it preferable to give two Antikamnia and Codeine Tablets, alternately with the Antikamnia and Salol Tablets. The latter tablets promptly arrest excessive fermentation and have a pronounced sedative effect on the mucous membranes of the bowels and stomach, and will check the various diarrheas without any untoward effect.

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXIII.

TORONTO, JULY, 1909.

No. 1.

Original Articles

REMARKS ON RECENT SURGERY OF THE UPPER AIR TRACT.*

BY WALTER F. CHAPPELL, M.D., NEW YORK.

Medical or surgical treatment of the upper air passages received scant attention from medical teachers and writers in the early periods of medicine. They seemed to think no serious local or general disturbance could result from an impaired condition of this mucous tract. The medical graduate merely heard of nasal polypi, follicular tonsilitis, and quinsy, but was not taught to examine the anterior or posterior nasal passages or the larynx; in fact, when I graduated, the class considered it rather beneath their notice to study anything connected with the eye, ear, nose, or throat.

This is in marked contrast to the opinions held to-day. The best minds in general and scientific medicine believe that the mucous membrane of the upper air tract is one of the chief avenues by which infection enters the general system. Time will prove, in my belief, that most of the contagious diseases also gain entrance to the human body through the respiratory mucous membrane. Is the full importance of this understood by the laryngologist and rhinologist of to-day? Unfortunately, too many specialists begin practice before they become thoroughly experienced in general medicine, the groundwork of every specialty.

Operative interference in diseased conditions of the upper air tract, including both the conservative and radical procedures, remained for a long time a neglected field of surgery. Step by

*Read at Ontario Medical Association, June 1st, 2nd, and 3rd, 1909.

step, one operation after another was devised and added to the available methods of combating regional diseases, with their immediate and remote results, until now, to quote Gluek's words at the First International Rhino-Laryngological Congress in Vienna, April 22, 1908, it may be said that the technical and therapeutical problem of the surgical treatment of these organs is practically solved. But remarkable as are the triumphs of operative skill and the clinical benefit derived therefrom, there will always be some room for further improvement along these lines, until the ideal of the true surgeon has been attained.

It is not my intention to name or describe the many operations with which you are all familiar, but to present them in a somewhat critical way, from the standpoint of one who has viewed the subject as a general practitioner for twelve years and as a specialist for eighteen years.

A somewhat arbitrary division will be used to present the subject in a clear manner.

OPERATIONS ON LYMPHOID TISSUES.

Under this head, operations on the lymphoid tissue of the nasopharynx and faucial and lingual tonsils will be considered.

It is not many years since the relief of mouth breathing was the main consideration, in the removal of adenoids. For this purpose, it was not uncommon for the children to visit the physician's office once a week and have a small piece removed with the forceps or the doctor's finger. This method of treatment extended over months, and as soon as the nasal breathing was improved the treatment ceased. Such measures soon proved inadequate, as the mouth breathing returned, and the influence infection had on lymphoid tissue began to be recognized. Infection through the nasopharynx was found to be very virulent, from the fact that its lymph vessels entered directly into the main lymphatic channel, and produced a profound general systemic effect, and in many cases a local effect on the middle ear cavities. More radical measures were at once sought for a complete removal of the infected tissue.

The various means recommended are well known. After an experience in private and hospital cases, covering about four thousand cases, I am satisfied that in skilful hands, the curette and adenotome are the best instruments in use. There is little danger of injury to the vomer, eustachian prominence, or soft palate, and much less destruction of mucous membrane than when the forceps are employed. With forceps I have seen a large piece of the basillar process of the occipital bone punched out, making an

opening into the brain cavity, also pieces nipped off the posterior end of the vomer and eustachian prominence, and a number of ruptures of the soft palate. A specialist should have at least one dozen eurettes and four adenotomes of varying size. The instruments to be used for a given case should be selected after the patient is under the anesthetic, and an examination of the nasopharynx has been made. Select a large instrument, as near the size of the cavity as can be judged; this will serve to remove at one sweep the great mass of tissue. A smaller and narrower instrument is next selected to clean up the outer margins of the nasopharyngeal cavity. If an adenotome is employed, it should not be pressed downward until the knife has been pushed home; otherwise the mucous membrane would be stripped down on the posterior pharyngeal wall.

Passing to the operations on the tonsils, text-books, even to the present time, state that the tonsils should be cut off even with the pillars of the fauces, and that the remaining stump will atrophy or at least cause no trouble. This statement is known to be erroneous by all men of experience, as the stump of a tonsil cut even with the faucial pillar is more likely to grow than atrophy. The matter of infection is now considered the most important factor in determining the removal of tonsils. Large, healthy tonsils cause obstruction, but are not so dangerous as avenues of infection as small, degenerated and infected tonsils.

A number of radical operations on the tonsils have been recommended during the last three years, and, in my opinion, this procedure has been carried too far, and a more conservative attitude should be taken. One class of operators place the extirpation of the tonsils in the class of capital operations, which takes from one hour to an hour and a half to perform. They place the patient on the side, and with the mouth widely opened, proceed with various instruments specially devised for the purpose, to remove every particle of tissue between the anterior and posterior pillars of the fauces, and from the base of the tongue, and, in some instances, part of the tongue, to the top of the superior tonsillar fossæ, and, externally, to the pharyngeal constrictor muscles. Another school of operators do almost as radical an operation with various special snares. After stripping the faucial pillars of every particle of extraneous tissue, and separating all adhesions with specially devised knives, they remove the main part of the tonsil slowly with the snare, and if any remains it is treated similarly until all the tonsillar tissue is extirpated.

I wish to take this opportunity of entering a strong protest against both of these operations, excepting in a few selected

cases where the snare may be used. Such a destruction of all the tissues in the tonsillar space, in addition to the tonsil itself, is unjustifiable and unwarranted. The large cicatrix formed frequently draws the anterior and posterior pillars together and retracts the tongue. In three instances, where radical operations on the tonsils had been performed, I have seen the tongue attached to the anterior pillar half way to the uvula, with a discomfort to the patient which you can readily imagine. I am not prepared in this paper to make an exact statement of the effect of these radical measures on the voice, but owing to the diminution in size of the tonsillar spaces, and the amount of cicatricial tissue left after these operations, I am convinced that there is in many instances a permanent effect on the lingual and faucial muscles, and also on the tone of the voice, to say nothing of a continual and incurable dryness which follows. Another somewhat radical but permissible operation, in selected cases, is the finger enucleation of the tonsil. This can be done in from two to four minutes, and is simply a shelling out of the tonsil from its bed, and does not injure or destroy materially any of the surrounding tissue. There is much less cicatricial tissue left than after the more radical measures already described, also fewer adhesions and retractions of the neighboring parts. There is, however, a great deal of soreness of the throat after a finger enucleation. In my experience, the most satisfactory operation on the tonsil can still be done with the tonsillotome, preferably the modifications of the Mathieus. In this operation, a number of tonsillotomes varying in size are needed. The first one used should be a little larger than the tonsil, so that it can easily slip over the tonsil, then a pressing and side to side movement should be employed, so as to draw the tonsil further within the instrument, at the same time it pushes the capsule and pillars outwards from the surface of the tonsil; a further grip can be obtained by gentle external pressure. This all being done, spear the tonsil and cut it off. Immediately seize another smaller tonsillotome and cut another piece off the stump, and still a smaller-sized instrument, if any more is to be removed. Smaller pieces may be removed by narrow, shallow-bladed punches. This procedure in experienced hands does a very complete operation, with a minimum amount of traumatism, and can be done quickly. I consider it very important to give particular attention to the tonsillar tissue in the supra-tonsillar fossæ. This is often overlooked, and causes no end of trouble.

Post-operative tonsillar hemorrhage is not infrequent, and is usually easily controlled. Occasionally, however, some radical measure has to be undertaken to successfully cope with the bleed-

ing. The special compressor of Mickulicz is recommended by many, but it is not always available, and so many deep, sloughing ulcers have followed its use that I cannot endorse it for routine work. A method I have never known to fail, and I believe will take the place of tying the carotid artery, may be described in a few words: Take some Bernays sponge, about half an inch wide and one inch and a quarter long, make two small holes through it, wrap it in gauze, place it between the pillars of the fauces, and with a special or an ordinary curved surgical needle threaded, pass the needle through the posterior pillar, then through one of the holes of the sponge, then through the anterior pillar, and tie a tight knot. One suture will do, but if the hemorrhage is a severe one, two sutures would be better. This is a very satisfactory way of dealing with the severest cases of tonsillar hemorrhage. In a few rare cases, hemorrhage at the time of operation has been so severe as to threaten immediate death. I always carry two long soft rubber tubes for such an emergency. A tube should be passed through each nostril to the top of the larynx, and as soon as air is found to come through both tubes, the whole pharyngeal cavity and mouth can be packed with gauze, which at once completely controls the severest hemorrhage.

In this connection the effect of the administration of calcium lactate on the amount of bleeding following the removal of adenoids and tonsils is interesting.

For the past six months I have given all my patients who had adenoids and tonsils removed, and also in septal operations, Merek's calcium lactate powders. The administration began the day before operation, and thirty grains in all were given children under five years of age, forty grains for children from the fifth to the tenth year, fifty grains from tenth to fifteenth year, and sixty grains after the fifteenth year. In all the cases there was a diminution in the amount of blood lost; especially in the removal of tonsils. This was so marked that it seemed almost uncanny when compared with the amount lost in cases not taking the lactate.

In the removal of adenoids, lessened hemorrhage was not so marked, probably due to the fact that there is some traumatism of the mucous membrane, and it is possible that the calcium lactate has a special action on the circulation of lymphoid tissue. This we hope to determine later, as Dr. Jonathan Wright, the pathologist of the Manhattan Eye, Ear and Throat Hospital, is making some investigations on this subject. Dr. Frederick J. Barrett has investigated the coagulability of the blood in some of my cases, and reports as follows:

Twenty-five cases have been tested at the Clinic of the Man-

hattan Eye, Ear, and Throat Hospital, both before and after the administration of the calcium lactate. The preliminary test showed an average coagulation time of 5 minutes 41.4 seconds. After the administration of the lactate the average coagulation time was 4 minutes 58.2 seconds, showing a decrease in average time for the twenty-five cases of 43.2 seconds. The cases do not permit of grouping according to age, nor original length of coagulation time, nor dosage, except that those who had the bulk of their lactate on the day of the final test showed a somewhat shorter coagulation time than those who had the lactate the previous day. This is in line with some English experiments, which showed the maximum effect of the lactate two hours after administration. Much more could be said on this subject if time permitted, but I strongly commend the lactate of lime to your consideration, and urge that a reliable sample of the drug be employed.

OPERATIONS ON SEPTUM.

No part of the human anatomy has probably received worse treatment than the nasal septum. Hidden from the gaze of the public, and from many of the doctors, it has been cauterized, electrified, sawed, broken, in fact, everything that could be devised by human ingenuity has been tried on the septum. The submucous operations are the only rational means that have ever been offered for the various deformities of the septum, which does not destroy the mucous membrane. The submucous method should be employed in dealing with all spurs, ridges, and deflections. In moderate-sized ridges and spurs, it is only necessary to separate the mucous membrane, perichondrium or periosteum from the cartilage or bone, then employ the knife, saw or chisel for the removal of the excessive tissue, replacing the mucous membrane. In deflections of the septum which cause symptoms calling for the removal of the deflection, the submucous operation is the only one which meets our ideal of good surgery and effective results for the patient. These operations require considerable experience and care in their performance, and should not, in my opinion, be done on children under ten, nor adults over sixty. Most operators waste a great deal of time by the multiplicity of their instruments; as our experience increases fewer instruments will be used. Many do not carry their primary incision far enough on the external wall of the nasal passage. The secret of success is a long primary incision extending from high up on the septum across the floor of the nasal passage on to the external wall, a complete and extensive separation of the mucous membrane, etc., before any removal of the septum is begun. I find it much better in perforating the septum to remove a large

piece with a sharp in preference to picking out small pieces at a time. There is a great temptation when you have the mucous membrane well separated from the septum to continue to remove parts of the septum until every vestige of the deflection has disappeared. It is a mistake, however, to be too radical at this time, and a good, serviceable working nasal passage is much more to be thought of than the artistic appearance of the septum. Conservatism should, therefore, be employed in removing the pieces of the nasal septum. Drainage helps a great deal in obtaining successful results, and if the operation has been extensive, posterior drainage should be given as well as anterior.

It is not unusual for patients to be allowed to go about the day of the operation, and even to their work the following day. This seems a great mistake, as in the use of so much cocaine, and the removal of important tissues, considerable shock is undergone, and it is much wiser to keep the patient more or less quiet, and with little exertion for at least a week following the operation. It is not a simple procedure, or one devoid of danger, and, as already stated, should be only undertaken by those who have had experience in such matters. The Asch operation has properly been entirely superseded by the submucous methods.

OPERATIONS ON SINUSES CONNECTED WITH NASAL PASSAGES.

Much has been done during the past few years to develop the treatment of the sinuses. This has been chiefly in an operative direction, and has been carried entirely too far, and many operations undertaken that in the light of more experience have been given up. Trans-illumination and also X-ray photography have done much to aid diagnosis in diseases of the sinuses, although neither are absolutely certain as a diagnostic measure. A maxillary sinus may give a perfect trans-illumination and still be full of pus—I have seen one such case—so that both X-ray and trans-illumination may only be considered as contributory evidence in a diagnosis. In acute cases of frontal sinusitis, every measure, such as douches of adrenalin, 1-5000, every two hours, and application of cocaine over the middle turbinate, and even a careful removal of the anterior tip of the middle turbinate should be tried before resorting to the external operation. In my hospital and private work, I have never performed this operation on an acute case. In many cases I have thought that at last the acute case had arrived needing an external operation, but by persistent treatment on the lines suggested the cases have recovered and have not continued as chronic cases. No doubt, in rare instances, it may become necessary to open an acute frontal sinus, but for a few years there has been a tendency

in some quarters to perform this operation too frequently, and we cannot urge too strongly against this line of treatment. In chronic frontal sinusitis, the course of treatment is different, and in some cases nothing but the external operation will give permanent relief from the headache and nasal discharge. Before resorting to this, however, the middle turbinate should be removed and all intra-nasal measures adopted that are known to be useful in curing these cases. When the minor measures prove futile in giving relief to the condition, we should then unhesitatingly recommend the external operation. No detailed description of any one method of performing this operation is needed before a society of specialists, and no method is a panacea in all cases, and only experience will guide you in your selection. Until about one year ago the most radical measures were adopted, but a marked degree of conservatism is now noted in the recommendations of all experienced operators. The disfigurement of the face should be considered in dealing with this sinus. Beyond a thorough cleaning out of secretion and granulation tissue, it is not necessary to remove every part of cancellous tissue simply because it looks red. Good drainage into the nose is essential. It is not unusual to open up several sinuses at the same time, and it may safely be done in some instances, but as a rule it is much better not to be too radical in dealing with cavities so intimately associated with the cranial membranes. Many deaths from meningitis could be traced to operations on the nasal passages or the cavities connected with them.

In dealing with the maxillary sinus, conservatism should also be practised. In the acute cases, if you are reasonably sure of the presence of pus, introduction of a small trocar through the wall of the nose, drawing off the pus, and washing out the cavity, is good practice, and may not have to be repeated. An exploratory puncture is also allowable.

The treatment of chronic disease of the maxillary sinus is wholly operative and the nasal route is preferable. In these cases it is important to make a large opening from the nasal passage to the sinus.

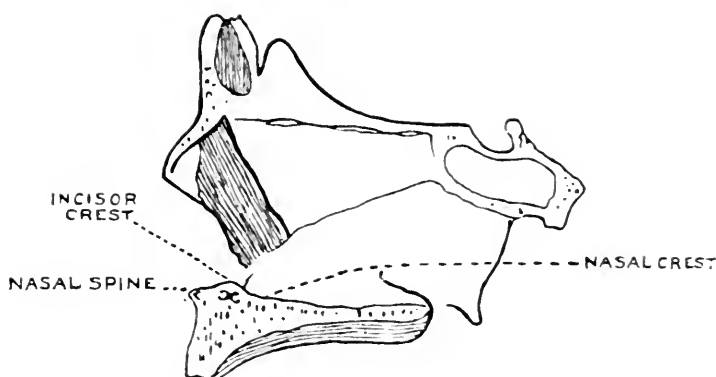
There are many new minor operations, which time does not permit us to touch, but I want to draw your attention for a moment to one designed by one of my assistants, Dr. John Mackenty.

This operation is intended to relieve nasal obstruction from the following causes: Collapse of the alae-nasi; congenital occlusion due either to abnormal smallness of the opening or to high placement of the anterior floor. Acquired high placement of the anterior nasal floor caused by narrowing of the dental arch and

raising of the hard palate during the plastic period in the growth of the facial bones.

The operation aims to lower and widen the anterior nares and allows the air to enter the nose at a lower level. Begin the incision well up on the septal side of the naris and curve it downward along the cutaneous margin of the nostril, across the floor and up on the ala for a short distance. With scissors and knife raise a flap and extend it back on the septum and floor beyond the ridge of bone, which extends laterally from the incisor crest across the floor of the anterior nares, as indicated in Fig. 1. This ridge of bone is cut away with chisels and forceps until the floor of the nostril lies on a level with the floor of the inferior meatus, and from

ANTERO-POSTERIOR MEDIAN SECTION.



✕—The incisor crest, point at which ridge or elevation of bone begins, extending laterally across the floor of anterior nares.

the septal side remove as much of the tissue as can be spared without endangering the support of the nasal tip. All the redundant soft tissue is cut away from the flap and the parts lying in the vicinity of the ala.

When the flap is brought down, we find it lies from an eighth to a sixth of an inch above the newly-made floor. To remedy this the flap is cut backward and downward well up on the septal side to the floor of the nasal passage. This leaves the uncovered area on the septum and not on the floor, and places the area of cicatricial contraction where it can do no harm. Three stitches unite the severed edges of the skin. To bring the parts better together, a splint made from dental sheet rubber is worn for a week.

Up to the present time eight cases have been treated by this method, five for collapse of the alae nasi, one for fracture of the

superior maxilla, in which the lines of fracture entered on and occluded the nostril of one side, two for high placement of the floor of the nostril. In all cases the nasal passage was widened and the obstruction completely relieved.

My associate, Dr. Harmon Smith, has done some excellent work with paraffin in correcting nasal deformities, and a few words on this subject may interest you.

EXTERNAL NASAL DEFORMITIES.

The most frequent external deformity is that of saddle-back nose. In properly selected cases this deformity may be overcome by the sub-cutaneous injection of paraffin. If the skin is loose over the deformity, if the patient has no active syphilitic manifestations, if there is no Bright's nor diabetic disease existing, and if there is any support remaining sufficient to uphold the injected paraffin—then one is justified in its employment with the following precautions.

Thorough surgical asepsis and antisepsis must be applied to operator, patient, instrument, and paraffin.

The paraffin is injected by means of a screw piston syringe, in the barrel of which the paraffin is cold, but the needle should be warmed before inserting beneath the skin. The operator should insert the point of the needle beneath the skin and extend it quite beyond the deformity, and the injection should always be made towards the tip of the nose. The assistant should exert digital pressure over the root of the nose, sufficient to prevent any paraffin returning to the general circulation through venous channels. The injection should cease when there is any evidence of pressure on the skin, and a subsequent injection may be necessary to overcome the deformity, but should not be made in less than two weeks. Cold compresses should be applied for a few hours after injection.

The dangers attributed to this operation are avoidable, and one is justified in its use for the correction of unsightly deformities, but not for facial blemishes.

NEW SURGERY OF THE LARYNX AND TRACHEA.

After the laryngoscope came the recommendation of Kirstein to use a straight tube introduced through the mouth into the larynx, and the reflection of a strong frontal light down the tube, allowing of direct inspection of the larynx subglottic and even the tracheal region. Killian, following up this idea, lengthened the tubes and

introduced them through the mouth or through an opening made in the trachea. The former he called upper direct tracheoscopy and bronchoscopy, the latter lower direct tracheoscopy and bronchoscopy. Chevalier Jackson of Pittsburgh has, in my opinion, improved this new field of surgery by placing the light at the end of the tube, so as to brilliantly illuminate the field at whatever point you place the tube. I have used both the Killian and Jackson tubes, and have no hesitancy in pronouncing strongly in favor of the Jackson tube. The tube method of examining the bronchi, together with an X-ray picture of this region, has opened an entirely new field in surgery and saved many lives.

In my early years of practice I knew of four cases where it was known the foreign bodies were lodged in the lower bronchi, but no operation for their removal was known, excepting through the chest wall, which always resulted fatally. This was the accepted position for all such cases until Killian conceived the brilliant thought of lengthening the Kirstein tube. Nearly all these cases can now be saved, and while it needs some experience, certainly every town which supports a throat specialist should have one competent to use the tracheal or bronchial tubes, should the occasion arise. Further detail of the various bronchial operations does not seem necessary before this society. Besides the use of the long tubes in the trachea and bronchi, the short tubes are very serviceable in some laryngeal conditions. For diagnostic purposes, I have employed the Jackson tube as a means of obtaining further information about certain laryngeal growths. Of course, some laryngeal growths, from their location and nature, can be fully seen by the laryngoscope, others again, situated in the subglottic region or springing from the ventricle of the larynx, may be seen so indefinitely that a diagnosis is impossible. In these cases, the tubes allow us to inspect the tumors carefully, and even touch them with instruments designed for the purpose. This is of great assistance in my experience, and does away with exploratory thyrotomy in most instances.

In the removal of foreign bodies and tumors from the larynx of children, the short tube is also invaluable, but under similar conditions in adults, it does not supersede the laryngoscope. In fact, it is easier and better for the adult patient to have these operations done by the laryngoscopic method, if he is in the hands of a man competent to use the necessary instruments. I regret to state that it is my observation that, since these tubes have come to our assistance, there is a great falling off in expert laryngoscopy: in fact, many of the younger men have no skill whatever as laryn-

gologists. This is a great mistake, as the laryngoscope, laryngeal tube, tracheoscope and bronchoscope all have their special place in surgery, and as trained specialists we should know and be prepared to employ whatever method is recognized as being for the best interest of our patient.

Although there is little new to be said about the treatment of laryngeal cancer, it would hardly seem fitting to close this paper without mentioning this important subject. The opportunity for the early treatment of this disease is what interests us most. Nothing can aid us in this direction more than a plea from all laryngologists to medical colleges for better clinical instruction in laryngology. When medical graduates can intelligently examine the larynx and decide whether a hoarseness is due to simple laryngitis, a tumor, or an ulcer, then we may expect to give early and efficient treatment.

TREATMENT.

Passing to the treatment of laryngeal cancer, I wish to state that I do not propose to consume your time reciting the opinions of others, or the details of the various operations, but briefly state some personal opinions on the treatment in the early stages of the disease. Some writers, in discussing the treatment, have made no distinction between the intrinsic and extrinsic cancers, which is an important division, not only from the standpoint of treatment, but also for diagnosis and prognosis. This division allows a much clearer description and treatment of the whole subject. When a positive diagnosis of intrinsic laryngeal cancer is made, operative measures are the only means we should employ; all others fail to cope with the gravity of the disease. Thyrotomy, in my experience, possesses the greatest therapeutic significance in the treatment of the disease. It is suitable when the growth is limited to the vocal cords or the soft parts in the interior of the larynx. In regard to the post-operative security from recurrence, it is nearly equal in value to laryngectomy, whereas the safety of the operative intervention as such, renders it infinitely superior to total or even partial resection of the larynx.

In a doubtful or suspicious case of laryngeal tumor, an exploratory thyrotomy is justifiable, although, as already stated, Jackson's tubes have, in most cases, removed the necessity of explorative measures. Personally, I would not consent to or recommend complete laryngectomy in an early case of intrinsic laryngeal cancer.

Extrinsic laryngeal cancer is an entirely different matter, and must always be considered serious. In a patient under fifty-five years of age, when the cancerous tumor has been discovered early, total extirpation of the larynx should be advised, excepting when the new growth is confined to the epiglottis. Of course, the serious risk of the operation should be explained to the patient, and also the discomfort of wearing a tube, which he will be obliged to do.

From the point of view of recurrence, total resection of the larynx is superior to all other operative measures. After the patient is fifty-five years of age, I do not advise the radical operation, even in early cases of extrinsic cancer. I believe that partial extirpation promises more for the patient. The kind of partial removal would depend on the location and size of the tumor. Complete extirpation of the larynx has no attractions for me. It must, however, be recommended in certain cases, and when successful, is a brilliant surgical triumph. A life may be saved, but I know of no more pitiable object than a person without a larynx.

No. 7 East Fifty-fifth Street.

CASE OF MYASTHENIA GRAVIS.*

BY JAMES MACCALLUM, M.D.

R. J., *act.* 57, contractor, was sent to me on June 27th, 1905, by Dr. Mulligan, of Petrolia, to whom he had complained of double vision and weakness of muscles of the back of the neck, left arm and lower jaw. Three weeks before, his left upper lid began to droop and the left eye to roll up. Double vision and dizzy attacks followed, and pain in the back of the neck and head; the double vision was worse in the afternoon and evening. Power is lost in the muscles of the neck, so that he can scarcely hold his head up. He says that his arms seem weak when behind him, for he cannot button on his collar at the back; but when his arms are in front of him he has full power. Occasionally he seems to lose power over his lower jaw, so that he cannot chew his food. It tires him out so that he has to use his hand to move the lower jaw up and down. If he rests awhile, he can chew again; but soon he must again have the help of his hand. He has had some difficulty in speaking also.

*Presented before Academy of Medicine, Toronto.

When he pushes his jaw forward, he feels that he loses power over it, and cannot raise it.

To prevent dizziness, he keeps his left eye shut. He cannot close the left as tight as the right, nor can he open it as easily against resistance. When he laughs, his face draws a little to the left. When the left eye is opened, the ball is seen to be higher than the right and turned in. A prism of 15°, base down, corrects both the turning up and the convergence. Papillary reactions normal, fundus normal. R. V. 6/9. L. V. 6/9. Examination showed tongue, palate, uvula and larynx to be normal.

His peculiarly motionless, listless, almost mask-like face, and his white hair give him an appearance of age beyond his years, not borne out by the condition of his arteries. A year ago he had an epithelioma removed from his lip.

He was engaged in building a fence when he noticed the eye beginning to be affected. This, and the fact that the joints of his hands were stiff, as well as the absence of anything pointing to a central lesion, had caused the diplopia to be considered as due to rheumatic paralysis of the ocular muscles, and treated as such.

An ophthalmoplegia externa, as manifested in the ptosis and diplopia, did not in any way explain the other outstanding symptoms, the peculiar weakness of the muscles of the neck, jaw and arms, then recovery of power after a rest, and their speedy weakening when again set in action, and a tentative diagnosis of myasthenia gravis was made.

He was told to wear a ground glass over the left eye to relieve the dizziness produced by the diplopia.

On July 12th, Dr. Mulligan wrote that on the least exertion there was a trembling of the muscles, some thickness of speech at times, and great complaint of his jaw becoming tired when eating, but the wearing of the ground glass had relieved his diplopia.

As he made no progress toward recovery, he consulted a Chicago neurologist, who diagnosed bulbar paralysis, and told him that he would not recover.

Toward the end of August he was seen by Dr. Hugh A. McCallum, of London, who writes me: "The muscles of mastication tired out in chewing a piece of meat, so much so that he was unable to move his jaws for a time. They would recover and be as powerful again for a few bites as in the days of his health. His hand-grasp at first was normal, but after grasping four or five times, he lost power in the hand and arm entirely.

"Some weeks before I saw him, on attempting to pitch some hay, he was suddenly seized with paralysis of the muscles of respiration, and for some few moments it seemed as if his condition would

terminate fatally. . . . Indeed the muscles of the eye, face, mastication and larynx, and many of the voluntary muscles of the limbs were involved. There were marked remissions of the symptoms."

I next saw him on January 11th, 1906, when he had improved greatly, the only symptom persisting being occasional weakness in holding his head up. He told me that after leaving my office on the occasion of his first visit, his knees gave way and he sank down, so that the myasthenia seems to have attacked the muscles of the extremity. For some time thereafter he says he had difficulty in breathing, in swallowing and in talking. After resting, he had less trouble in these things, but speedily tired out. He says that after taking one bite, he felt played out, and would have to support his jaw. The weakness of the arms was manifested especially in actions which required them to be raised, e.g., he could not put the bridle on his horse. He had great difficulty in winding the clock, which stood high up on the wall. His ability or inability to do this he used as a test of what progress he was making towards recovery.

On August 28th, 1906, his wife reports that he has no double vision, no weakness of any kind, and is now overlooking some building contracts.

The age of the patient made me doubt whether this might not be a case of bulbar paralysis, but the condition of the tongue, palate and uvula, and the involvement of the arms negated that. The non-appearance of atrophy, and above all, the subsequent history, puts that out of court. The absence of sensory symptoms led me to exclude neuritis.

Although this patient is, after a year and a half, apparently perfectly recovered, it is well not to be too sanguine, for the symptoms have been known to recur after even longer intervals.

13 Bloor Street West, Toronto.

SOME NOTES ON PUERPERAL INFECTION.*

By KENNEDY C. McILWRAITH, M.B.,

Associate in Obstetrics, University of Toronto; Chief of Obstetric Service,
Toronto General Hospital.

Mr. Chairman, Ladies and Gentlemen.—In a previous paper I have referred to the difficulties that arise in distinguishing infection from other causes of fever in the puerperium. To-day I wish to speak briefly on the subject of infection, and to indicate certain lines of cleavage, so to speak, which may be run through the great mass of puerperal infections, to aid us in prognosis and treatment.

Anyone who speaks or writes on the subject of puerperal infection finds himself at once confronted with the necessity for defining his terms. Without entering into the merits of the classifications in use, permit me to lay before you one which seems to me to possess some clinical merits.

There may be separated, then.

1. A group of cases in which there is more or less fever and other constitutional disturbance, accompanied by foul-smelling lochia. The germ is a saprophytic organism, and the whole affair clears up when the dead tissue upon which it thrives is removed. I propose to speak of this as *saprophytic toxemia*.

2. A group of cases in which the symptoms are often, but by no means always, much more severe. There is not, unless the infection be a mixed one, any putrid odor to the lochia. The germ is found to be one of the pyogenic organisms, *e.g.*, strepto- or staphylococcus, but there is no evidence that it has penetrated beyond the original site of infection. This covers septic infection of the endometrium and wounds of the genital tract. I shall call this *septic toxemia*.

3. In the third group I should place those cases in which there is obvious germ invasion of the maternal organism. Here we have parametritis, peritonitis, pelvic abscess, phlebitis in veins extending from the uterus, etc. This I shall call *septic invasion*.

4. Lastly come the cases in which a pyogenic organism can be recovered from the blood during life, or is found to be growing in some secondary site, which it must necessarily have reached by the blood stream. This covers septic endocarditis or pericarditis,

*Read at Ontario Medical Association, June, 1909.

pyemia, lung invasion, etc. These cases are, of course, but instances of further invasion, yet the symptoms are so much more severe and the prognosis so much graver, that one seems warranted in placing them in a separate class under the name of *bacteriemia*.

I do not mean to say that it is always possible to say definitely which of these conditions is present, but where it is possible prognosis and treatment are both aided.

Take we now the first two classes mentioned, saprophytic toxemia and septic toxemia. An overwhelming majority of all cases of puerperal infection commence in one or other of these ways. After a somewhat extended observation, I can say that I never saw death result from these causes alone, unless from long-continued neglect. In fatal cases there has always been invasion or bacteriemia. If this be a general law, it is obvious that in all treatment directed to the cure of these first two classes we must have in view the danger of furthering the invasion while endeavoring to eliminate the local infection, and that the treatment of them must be begun at the earliest moment possible.

The treatment recommended for saprophytic toxemia is as follows: Keep patient in Fowler's position, and give calomel and salts.

1. For sloughing wounds of vagina or perineum, touch the sloughs and foul surfaces with pure carbolic acid, then with alcohol, and then dust with iodoform. Keep the surfaces dry and separated by iodoform gauze. I have recently been using powdered caroid instead of powdered iodoform on the sloughs, and find the results very satisfactory. Use no douches in these cases, lest the infection be carried up into the uterus thereby.

2. If the foul material be within the uterus anesthetize the patient, pass the hand into the vagina and the fingers into the uterus and explore every portion of it thoroughly, removing everything that can be removed by the finger tips (not finger nails); then wash the uterus out with $\frac{1}{2}\%$ of lysol and pack in iodoform gauze, which may be removed in 24 hours. Do not use a curette, do not repeat the douche or any other local treatment.

For septic toxemia the treatment recommended is as follows:

Fowler's position, calomel and salts; quinine 1 gr., t.i.d., for tonic effect; strychnia gr. 1-60 four times daily to strychnia gr. 1-30 six times daily as may be needed; whiskey, 1 oz. every four to six hours. *Keep patient out of doors, even in winter weather, as much as possible.* This treatment is designed to increase the patient's resisting powers. For its germicidal effect collargol, 2 drms. of a 5% solution may be given per rectum thrice daily. I intend also to try the effect of introducing bougies containing 2 grains of collargol

within the uterus for this class of case. No other local treatment, either curette or douche, should be used, and the patient should be kept absolutely at rest and given the most nourishing food that she can digest. The collargol has proven beneficial in many of the cases in which I have used it as a rectal injection. In this connection I should like to cite three cases which were under my care at the General Hospital this winter.

1. A woman who had foul lochia soon after labor, in whose uterus there were found by culture procedure both saprophytes and streptococci. The uterus was emptied in the manner described above, and the saprophyte infection ended. Septic invasion with parametritic exudate soon followed, however, and she recovered after a long illness. In this case the placental site was low down, a fact which has some influence in determining septic invasion in my experience. The local treatment was forced upon us by the presence of saprophytic infection, but I feel that that treatment helped to further the invasion.

2. At the same time I had a patient who came to us near her full term with a uterus so far prolapsed that the cervix was down between the labia. Soon after labor this woman also developed a high temperature, and the lochia taken from within the uterus showed a pure culture of streptococci. She was given the treatment detailed above minus the collargol and plus some capsules of quinine and salol, such as are often given for influenza, which was very prevalent at that time. In a week she was quite well. *No local treatment whatever was given.*

3. A patient who had been confined outside the hospital came to us and got along perfectly well for a week. Her temperature then suddenly rose very high and she had every appearance of being very ill. She was treated in the same way as case 2, and in a few days was quite well. Cultures from her uterine lochia also showed pure cultures of streptococci.

4. A patient who was confined outside the hospital, and who, according to her physician's account, did very well for a week and then developed a high temperature. On coming to the hospital she showed a temperature of . . . ; the leucocyte count was 6,600; the patient was deeply cyanosed, almost pulseless, and general condition very bad. Four years previously I had confined her in the hospital, at which time she had eclamptic convulsions. She seemed to me to be in a typhoid state, but the Widal test was negative. There was no odor to the lochia, and the involution was good. Cultures taken from high up in the cervix showed staphylococcus pyogenes aureus. She improved markedly under the treatment given

above, collargol per rectum seeming to be especially beneficial. The Widal was positive on two subsequent occasions, and the condition was probably typhoid.

The question I wish to raise is, how much had the germs within the uterus to do with the symptoms in these cases? My own impression is that they had nothing to do with the cases at all, but that they would have had if I had tampered with the uterus in any way.

The treatment of septic invasion is the same as that for septic toxemia, with the addition of such surgical measures as may be necessary for the evacuation of pus and an ice-bag over pubes for pain, if peritonitis. Pus in the pouch of Douglas or beside the uterus should be evacuated per vaginam whenever possible. I may add that morphia should be given freely for pain.

The first principle in the treatment of inflammation is *rest*. Therefore do not douche, curette or move the patient about.

The treatment of bacteriemia is much the same as for septic invasion. Collargol I have given intravenously in such cases, but have had better results from it when given by the rectum. *Open-air treatment is of the first importance*. Lastly, never give up cases—even apparently the most desperate sometimes recover. Oxygen inhalations have proven beneficial at times, and at times also the anti-streptococcic serum.

Medicine

GRAHAM CHAMBERS, R. J. DWYER, GOLDWIN HOWLAND, GEO. W. ROSS, WM. D. YOUNG.

Newer Conceptions of Cardiac Arrhythmias and their Treatment.

SATHERTHWAITE, T. E. *New York Medical Record*, May 15th, 1909.

According to modern physiology, the heart muscle is not a passive instrument on which the nervous system plays. On the contrary, it originates its own movement, rhythmically continues it, and conducts the contraction wave by means of its own fibres.

Until recently the supposed absence of muscular continuity between the segments of the heart in the higher vertebrates was an insuperable objection to the so-called myogenic theory. The discovery of the muscle bundle of His bridging auricle and ventricle removes the difficulty and disposes of the old theory of neurogenesis for the time being. It is admitted, of course, that the nervous system does act on the heart, but disturbance of this action results only in a variation of rhythm within normal bounds without "imperfect systoles" or "missed beats." It is functional in character, depending on a temporarily disturbed condition of the heart; or upon an underlying systemic affection; or a transient disturbance of nerve function. The pulsus paradoxus and the disturbance of circulation in Cheyne-Stokes breathing are examples. This type of arrhythmia is termed pneumogastric, or by those who believe that the normal rhythm starts in the region of the venæ cavae or coronary veins, fundamental or sinus irregularity.

The second class of arrhythmias are the extra-systolic, caused by premature contractions of auricle and ventricle in response to a stimulus from some part of the heart other than the sinus, but where otherwise the fundamental rhythm is maintained. It may be easily recognized by a polygram, *i.e.*, simultaneous tracings obtained from the jugular vein and radial artery or apex beat. In fact, it is only by polygraphic methods that every phase of the cardiac cycle can be accurately studied and the arrhythmias differentiated. Examples of extra-systolic arrhythmia are the "deficient" or "intermittent pulse" of the older classifications.

Disturbances of contractility give rise to a third type of arrhythmia, of which the "pulsus alternans" is an example. Here the pulse is irregular in size rather than in rhythm.

A fourth form has been described by Mackenzie under the name of Nodal Arrhythmia, on the theory that the disturbance originates in the auriculo-ventricular node. Here the auricles and ventricles

contract simultaneously, or the latter slightly before the former. It is present in most cases of heart failure. The rhythm is invariably irregular.

Affections of conductivity are responsible for the fifth and at present most interesting group of arrhythmias. The normal contraction wave starts in the sinus, passes through the auricle and then over the auriculo-ventricular bridge to the ventricle. But this path may be so affected that the impulse is delayed or even blocked. This constitutes the cause of the several varieties of "heart block." Each beat at the wrist may correspond to two, three or four auricular contractions.

The treatment will depend on what diseased condition of the heart or functional disturbance may be revealed by a careful study of the arrhythmia.

WM. D. YOUNG.

Relative Aortic Incompetency of Muscular Origin. ANDERS, J. M.

New York State Medical Journal, May, 1909.

Anders discusses those cases of relative aortic incompetency where there is neither sclerosis of the valvular segments nor appreciable dilatation of the aorta—in other words, only cases which are of muscular or neuromuscular origin.

He quotes one case from his own records and six from the literature in which a post-mortem examination showed normal aortic valves and practically healthy aortic walls. And yet these all gave the usual symptoms of aortic insufficiency during life. In nearly all the cases there was dilatation of the left ventricle, with myocardial changes, often secondary to mitral disease.

Again, he gives histories of two cases of his own and two from the literature in which well-marked signs of aortic insufficiency were present. The symptoms disappeared completely under treatment. Dilatation had been apparent in all. It is reasonable to conclude that they belong to the same class of muscular relative incompetency.

Anders' studies lead him to place cases of this kind in three well-defined divisions: (1) cases of muscular and nervous origin, that supervene in the course of fibrous myocarditis and other less serious conditions of the myocardium independently of valvulitis or advanced organic changes in the aorta; (2) cases secondary to chronic valvulitis, affecting the mitral segments, with failure of the left ventricle; (3) cases occurring in the course of, or following acute infective diseases, due to the action of the toxins upon the myocardium. Cases of purely nervous origin may also be met occasionally.

The conclusion is that well-marked symptoms of aortic incompetency do not invariably mean a lesion of the aortic valves—a fact influencing both treatment and prognosis.

WM. D. YOUNG.

Surgery

WALTER M. KEOWN, HERBERT A. BRUCE, W. J. O. MALLOCH,
WALLACE A. SCOTT, GEORGE EWART WILSON.

Cancer of the Breast. By MAURICE M. RICHARDSON, M.D.

Journal of the American Medical Association.

The writer strongly endorses the use in operable cases of X-rays, toxins, yeast ferments, radium and similar methods. He excises the skin widely and closes the gap by shifting the skin and opposite breast to the denuded area. The axillary vessels and nerves are dissected perfectly clean. The immediate mortality in his 398 cases was 4. Great stress is laid upon early diagnosis, and he urges the necessity of a campaign directed by the family physician.

Pain as an early symptom in carcinoma of the breast is usually absent, and when present the tumor has been first noticed by the patient. In the absence of any definite lump in the breast, but a feeling of an indefinable *something*, then the presence of pain would be an indication for operative procedure. A history of carcinoma in the family would strengthen the above view. The only safe rule in connection with breast tumors is to treat all cases as malignant until they have been proved benign.

A warning is sounded against removal of breast tumors without looking for secondaries, especially in the throat, abdomen or spine.

The use of the hollow punch or knife section for microscopic examination is not justifiable, as auto-infection has been clearly demonstrated after such procedures.

Three mistakes in diagnosis are narrated in his recent experience. In the first a fibroma, in the second a chronic abscess, while in the third a cyst was mistaken for a malignant growth, the breast being removed in each case. The advanced position taken by the writer is well indicated in the following passage: "The only safe treatment of breast tumors of all kinds, at all ages, is excision; for excision is the only treatment which will obviate the awful tragedies of overlooked malignancy."

Note.—It is not altogether clear what the writer precisely means by the word "excision." If it is intended to carry the impression that amputation should be done in all cases the position would be a dangerous and untenable one, throwing skill in diag-

nosis to the winds. A simple fibro-adenoma of the breast, for example, is diagnosed by surgeons of experience with the greatest facility, and should be removed, but the breast left behind.

G. E. WILSON.

Treatment of Simple Fracture. By LEWIS A. STINSON, M.D. *New York State Journal of Medicine.*

The writer is opposed to the operative procedure in simple fracture, except in those cases where the fragment cannot be placed and maintained in apposition. He points out that the suture material to be of any support must be tied tightly, and this produces very quickly a rarefying osteitis, which loosens the suture, so that external means must be relied upon to retain the part in position. Non-union is only very exceptionally due to anything which can be prevented by operation, as general causes lie at the bottom of the trouble. There is considerable liability to suppuration after an incision, and this, combined with the further injury to the periosteum muscles, etc., cause a further tendency to adhesions, with the production of impaired vitality, especially if the operation be near a joint. Attention is drawn to the fact that the picture in the skiagram does not necessarily mean a bad result, as it is well known that no such deformity can be detected in manipulation. Lastly, repair is slower after an operation in which the fragments have been still further displaced and injured.

G. E. WILSON.

Volkman's Contracture. By REGINALD H. SAYRE, M.D. *New York State Journal of Medicine.*

Dr. Sayre reports a case which he treated by the method of Jones (Liverpool). The patient was a girl aged eleven, who had a fracture of both bones of the forearm some two years previously. The proximal phalanges were hyperextended and the fingers could not be separated from the palm unless the wrist were acutely flexed. The treatment consisted in keeping the wrist sharply flexed while the fingers were slightly extended and placed in plaster for a week. They were again and again further straightened and again put up in plaster until they were perfectly straight. Then by stages the wrist was similarly straightened, while the fingers were kept extended. The result has been quite satisfactory. He is of the opinion that Jones' method should in all cases be tried before tendon lengthening or bone resection are resorted to. Of the two latter methods, he prefers bone resection.

G. E. WILSON.

Obstetrics

CHAS. J. C. O. HASTINGS, ARTHUR C. HENDRICK.

Appendicitis Complicating Pregnancy. With report of four cases
COOKE (CHARLES O.), Providence, R.I. *New York Medical Journal*, May 1, 1909.

The writer first gives a few historical notes, in which he states that the first reported case of this complication was in 1848, by Hancock, in the *Lancet*.

Frequency.—It would seem that the complication is a rare one. For example, of 1,000 cases of operation reported by Treves at the London Hospital, July 1, 1900, to Aug. 15, 1904, 319 were women. Of these 319 only 6 were pregnant.

Etiology.—Much the same as in non-pregnant cases, but where it has previously existed there seems perhaps rather more tendency to recurrence, owing to the breaking up of adhesions due to the enlarging uterus of pregnancy. However, the pregnant state does not predispose to the development of acute appendicitis.

Pathology.—The chief points here are that in the pregnant state the appendix may be situated much higher up, owing to the displacement of the cecum by the enlarging uterus. Also, since the pelvis is filled in the early pregnant state by the uterus, pus cannot burrow so readily into the pelvis.

And, finally, one sometimes finds an inflamed condition of the tubes secondary to appendicitis. Indeed, in the non-pregnant state, and in many females, appendicitis is perhaps the worst accident that can befall the tubes and ovaries outside of gonorrheal infection.

Symptoms.—In early cases the pain has the usual situation, and in late pregnancy the pain may be located high up under the liver. The pain may be periodic, and thus resemble labor-pains. The vomiting may be mistaken for the vomiting of pregnancy in the mild attacks, when pain is less severe.

Diagnosis.—The diagnosis is not easy. The most valuable aid is the leucocyte count and the percentage of polymuclear cells. In late pregnancy the presence of the uterine tremor, the rigidity of the abdominal walls, and the pain referred high up render diagnosis most difficult.

Differential Diagnosis.—In making a diagnosis the following

conditions must be differentiated. For example, pain in the *right* side may be due:

1. Myalgia—due to stretching of the muscles as the uterus enlarges, since sometimes the uterus is directed to the right flank.

2. Eclampsia gestation with rupture. Here there is usually some bloody *vaginal* discharge, intermittent, perhaps, in character, and on bi-manual examination a mass on the side of the uterus. Also symptoms of internal hemorrhage. (Dr. J. F. W. Ross has described a condition known as "dripping" from the end of the tube in some cases of tubal gestation before rupture. This may give rise to symptoms of colicky pains very like a mild attack of appendicitis.)

3. Pyelitis. Here, however, there are bladder symptoms more marked. The ureter may be felt thickened through the anterior vaginal wall and pus in the acid urine. But a tender ureter, especially if near McBurney's point, may be misleading. (Here the segregation of the urine might assist.)

4. Typhoid fever—Widal test.

5. Diseases of right ovary or tube. Here diagnosis is very difficult, especially if the appendix be adherent to them, but one may get a history of infection.

6. Ureteral Stone. One must remember that an inflamed appendix close to the ureter may cause bloody urine.

7. Gall stone.

8. Ovarian cyst with twisted pedicle. Here the pain is paroxysmal, and often out of proportion to the constitutional symptoms.

9. Floating kidney. Especially with torsion or kinking of the ureters.

10. Perforated gastric or duodenal ulcer.

11. Perforation of large intestine. It should be remembered that appendicitis might occur coincidentally with any or all of the conditions.

Prognosis.—For acute catarrhal and chronic recurrent types, it is much as in the non-pregnant state. The mortality is *nil*. The majority recover after *operation*, and the pregnancy is, as a rule, undisturbed.

But in the acute gangrenous perforation and abscess the outlook is grave. The course is rapid. The later in pregnancy the worse the prognosis, especially if pus has formed. Then miscarriage usually occurs (80% of the cases) whether operated upon or not, since the pregnant uterus forms part of the abscess wall. Then when the uterus is suddenly ruptured adhesions are broken down and general peritonitis results. With operation the mer-

tality is 50%, without operation nearly 100%. Hence, the best treatment is early operation, if possible before perforation or abscess formation.

Treatment. Operation is advisable in every case as soon as the diagnosis is established. In cases of doubt operation is safer than waiting, since sometimes the severest types of appendicitis present the mildest symptoms.

But the uterus should not be emptied either before or after the operation, since it forms the inner wall of the abscess cavity in suppurative cases.

The most favorable time for operation is within the first 24 hours of the attack, when the disease is confined to the appendix itself, and there is then less danger of abortion or miscarriage.

The writer then reports the four following cases:

Case I. Diagnosis, acute suppurative, with abscess, two and one-half months pregnant. Operation, abscess drained, incision closed above and below the drains. Patient miscarried on the third day. One week later developed scarlet fever. Died.

Case II. Acute appendicitis. Eight months pregnant. Had three previous attacks during the pregnancy. During the last attack miscarried. Baby 4 pounds. Operation after miscarriage, as the attack returned. Recovery.

Case III. Acute gangrenous. Pregnancy 6 months. Diagnosis of threatened abortion at first, but 6 hours later operation performed. Did not miscarry.

Case IV. Acute appendicitis. Eight months. Operation. Recovery. Miscarriage on fourth day after operation.

A. C. HENDRICKS.

A Case of Ventricular Hemorrhage Simulating Eclampsia.

RANDLE (A.), *The Lancet*, April 17, 1909.

The writer reports a case of a multipara, æt. 43, whom he was called to attend for a "fit." She was found to be six months pregnant, but the foetal heart was not heard. The convulsions were similar to the eclamptic form, but rather less epileptiform in character. She was treated for eclampsia, but at the post-mortem a considerable hemorrhage was found in the right ventricle, apparently starting from an anterior perforating artery. It was of some considerable duration, as the brain was softened. The kidneys were granular, albumin in the urine, and the heart hypertrophied.

A. C. HENDRICKS.

Ophthalmology

D. N. MACLENNAN, W. H. LOWRY.

Ophthalmia Neonatorum.

In the May numbers of the *New York Medical Journal* and the *New York State Journal of Medicine* are to be found several good articles upon ophthalmia neonatorum, viewed from the standpoint of the obstetrician, the general practitioner, and the specialist. Each author points out the seriousness of the problem to the State, when it is known that from 15 to 50% of all blind people are blind from the effects of ophthalmia neonatorum, and that a large percentage of these are left to the care of the State. The prophylaxis is discussed fully, some going so far as to recommend bacteriological examination of the parturient canal for the gonococcus, and the application of vigorous treatment, while all urge the routine use of at least 1% solution of silver nitrate in the eyes immediately after birth. This latter, well known as the Crede method, reduced the percentage of the disease in large institutions from 7—13% to 0.5%, and is considered by all to be the best known treatment.

Of course this treatment is valueless in the somewhat rare cases in which the child's eyes become affected before the birth process, and is of less value in the much more common cases in which the eyes become infected from a gonococcus discharge some days after birth. This leads us to the consideration of the most important but most neglected of all means of prophylaxis, namely, the education of the public to the serious consequences which may follow infection of the genitals with the gonococcus. Who of us has not seen young fellows with gonorrhea who looked upon it about as seriously as they would a common cold? Do physicians take enough pains to impress upon these young fellows what a serious affliction may be theirs before the end of it? Too often does the medical man act as a buffer between "the pleasant vices of men" and the exposure of their social dangers, and too often does he bow to public sentiment which demands that he conceal the cause and assume the blame by declaring that "to the carelessness or ignorance of those attending the birth of the child is due the

loss of sight of almost every child whose eyes have been destroyed by ophthalmia neonatorum.

We think that the public should be enlightened as to the true facts, so that the educational value of the truth may have its effect as a prophylactic. It would be exceedingly difficult to have legislative measures taken to compel the notification of cases of gonorrhea, but it would be an easier matter to compel the notification of cases of ophthalmia neonatorum, so that the authorities could demand that the child get the proper treatment. But, as we said before, the greatest effect will result from the educating power of each physician in his own sphere of influence, and with that end in view we think that special stress should be laid on this subject in the training of the student and of the nurse, so that each will recognize the seriousness of ophthalmia neonatorum and their responsibility to the public welfare with the cases which are bound to come to their experience.

Gynecology

F. W. MARLOW, W. B. HENDRY.

Sacral Suspension of the Uterus. By JOHN VAN DOREN YOUNG.
New York. *American Journal of Surgery*, March, 1909.

Dr. Young calls attention to the fact that in the erect posture the utero-sacral ligaments are the only ones that exercise any suspensory action on the uterus, since their bony attachment is above the uterus, and their uterine attachment at the junction of the body and cervix is at such a point as to act advantageously in keeping the fundus forward, and especially in keeping the cervix and vaginal walls from prolapsing. Consequently the operation which he describes for shortening these ligaments is of most value in cases where prolapse is a feature.

Any anterior operation, such as Gilliam's suspension by the round ligaments, is sufficient in cases of retrodisplacement without prolapse, but where this is present, a condition in which all the ligaments are relaxed, an anterior suspension will still allow the cervix to be displaced downward and forward, thereby crowding the bladder more toward the pubic bones. Hence in such cases Dr. Young favors utero-sacral shortening, and where the uterus is enlarged and the round ligaments much relaxed he sometimes combines with it a round ligament shortening.

The operation is performed in the Trendelenburg position after opening the abdomen, and consists of a reduplication of the utero-sacral ligaments, which shortens them by joining their weak middle portion to their uterine ends, and so making even a stronger ligament than normally exists.

The technique of the operation is well described and illustrated and the difficulties pointed out, and details of cases are appended. This operation, as described by Dr. Young, seems a most reasonable procedure, and, if efficient, should, though difficult to perform, replace many objectionable anterior operations, though round ligament operations will still be frequently indicated, and if it will overcome a prolapse which is still troublesome after a satisfactory perineorrhaphy it should certainly be given a trial. There are still many surgeons who suspend the uterus in some one of the many ways which involve putting stitches into the uterine tissue. That they may soon come to regard this as objectionable practice

is eagerly hoped. Of late one has made use of the Gilliam operation with very satisfactory results. In doing this one feels safer in obliterating any lateral openings by stitching the outer parts of the ligaments to the anterior parietal peritoneum before the ligament is drawn through to the fascia for fixation.

In the case of a young girl recently operated upon, on account of hypertrophic elongation of the cervix uteri and prolapse through the ostium vaginae, after amputating through the cervix a utero-sacral suspension was performed and the immediate result has been quite satisfactory.

P. W. MARLOW.

Submucous Perineorrhaphy. By W. WAYNE BABCOCK, Philadelphia. *Journal of the American Medical Association*, May 15, 1909.

Dr. Babcock describes in detail an operation for restoration of the perineum which he chooses to call original.

In a careful perusal of the paper one fails to see wherein the operation differs in any essential detail from the modified flap-splitting operation in which deep stitches of silkworm gut are passed immediately beneath the skin, including the fascia of Colles, the triangular ligament and the border of the levator ani muscle on each side, and the ends left long after tying to facilitate their removal. By omitting the skin a better approximation is obtained, there is less discomfort while the stitches are *in situ*, and infection is an extreme rarity. If desired superficial stitches through the skin, loosely tied, may occupy the intervals between the deep stitches.

Dr. Babcock makes a vaginal flap by his submucous suture, and his method of dealing with the flap is slightly different from the ordinary.

He does not separate the vagina from the rectum. In order to allow of a proper approximation of the levator ani muscles, one considers that at least a small amount of median separation is essential, and if the rectocele is large even a greater separation is desirable. The amount of separation required should be accurately judged in each case, and if care is taken there is no danger of wounding the rectum or of subsequent infection from it.

Dr. Babcock, one believes, has merely chosen a layer method of doing a flap-splitting operation as distinguished from a denuding operation, instead of using a mass suture to unite all the structures underlying the skin. Even yet surgeons are not agreed as to the superiority of the layer method of closing the incised abdominal wall over the mass suture after the peritoneum has been closed.

No doubt the doctor's faith in catgut is greater than ours, for one hesitates to use it at all in the perineum, where strong suture material is needed, and for several days, and where the possibility of infection is so great.

One has performed scores of operations by the modified flap-splitting method as suggested, using silkworm gut sutures. Their removal is easy when the ends are left long and tied together. They are absolutely dependable, and one has never by this method had anything but an admirable result. Besides, it is an operation which seldom requires more than ten minutes, and frequently less, for its performance.

F. W. MARLOW.

Temporary Ventro-Suspension of the Uterus. By EDWARD H. OCHSNER, Chicago. In *Surgery, Gynecology and Obstetrics*, January, 1909.

Dr. Ochsner describes a method of temporarily suspending the uterus to the anterior abdominal wall by means of a single absorbable suture of catgut, to be applied in cases where pelvic infection has necessitated operations, and in which it is desirable to prevent the uterus contracting fresh adhesions in an abnormal position, and especially in one of retrodisplacement.

He advises it as "specially applicable in cases with large pelvic abscesses, where large denuded areas are bound to remain after the evacuation of the abscess and removal of the infected organs, and also in cases of pyosalpinx, ovarian abscesses, old extra-uterine pregnancies and appendiceal abscesses, with leakage into the pelvis, in which the uterus shows a marked tendency to drop back in the pelvis when all the intra-abdominal work is completed." This procedure is undoubtedly a refinement in operating which may add to the subsequent comfort of the patient, and Dr. Ochsner has so arranged matters that the suspension done will not become permanent. It seems to one, though, that it is the exception rather than the rule that such a procedure is really necessary. It is rare after the removal of the adnexa, on account of inflammatory conditions, that one has observed any special tendency to retrodisplacement of the uterus. The tightening of the broad ligaments which is produced by the ligatures is usually sufficient to keep it from turning backwards if all adhesions have been freed from its posterior surface, and in the majority of instances any adhesions forming after such operations do not give rise to troublesome symptoms.

No doubt the principle involved is commendable, but one cannot help feeling that in practice its application is seldom indicated.

F. W. MARLOW.

Reviews

Common Disorders and Diseases of Childhood. By GEORGE FREDERIC STILL, M.A., M.D., F.R.C.P.; Professor of Diseases of Children, King's College, London; Physician for Diseases of Children, King's College Hospital and Hospital for Sick Children, Great Ormond Street, Oxford Medical Publications, London. Henry Froude, Oxford University Press. Hodder & Stoughton, Warwick Square, E.C. Toronto: D. T. McAvish & Co.

This is a work of exceptional merit. As its name implies, the common disorders of childhood and their diseases are taken up and treated in a most instructive manner. The book is full of suggestions as regards the treatment of the commoner diseases, which are often treated very sparingly by a general textbook in medicine. The articles on tuberculosis and on endocarditis are especially good. The author's condemnation of the wholesale removal of the foreskin in the operation of circumcision, is good advice. Many children are made worse by the treatment. Altogether, the book is a most valuable addition to the long list extant, and is most especially to be recommended to the young practitioner who still has his faith in drugs and common sense in the treatment of disease.

A. C. H.

Hydrotherapy. By W. H. DIEFFENBACH, M.D. New York: Reiman Co., Ltd.

This work on Hydrotherapy covers the entire subject in a most systematic manner, and will serve either for a suitable textbook for the student or as a rapid reference for the practitioner. The subject is one concerning which little is taught and little known, except by a few who practise this means of cure, and even such well-known types as the "Brand method" in typhoid are so imperfectly understood that it will amply repay the average physician to study the scientific reasons for such treatment.

The subject-matter may be divided into three divisions:

- (1) The physiology of the skin and the specific action of Hydrotherapy on the different organs.
- (2) The technique of the most important methods.
- (3) The application of Hydrotherapeutic measures in individual diseases.

The first division is briefly taken up in the first forty pages, and its conciseness makes it easily read and understood, and a great deal of information that will make one think is stored up, with up-to-date references.

The main part of the book is on technique, and the description is good, each method being fully illustrated by excellent plates.

The final chapters on the application of these methods include all possible diseases in which the treatments are of value, and a few where their theoretical value is greater than their general use would indicate. The most important features that are well described are: (1) Brand treatment, (2) Wernitz colon flushing treatment in septicemia, (3) Carbon acidemia, (4) Hyperemia in tuberculosis, (5) Nauheim baths.

G. W. H.

Applied Anatomy, Surgical, Medical and Operative. By JOHN M'LACHLAN, M.D., F.R.C.S., Eng. Revised and largely rewritten by A. A. Scot Skirving, C.M.G., F.R.C.S., Edin. Fourth Edition. William Wood & Co., N. Y.

This new edition of the admirable work on Applied Anatomy by John M'Lachlan, has just been published, and is a most complete work on the subject.

Vol. 1 has been thoroughly revised, and the section on eye and that on the ear, nose and throat have been rewritten. Vol. 2 has been completely rewritten. Throughout the work there have been introduced many new and instructive diagrams, and some old ones have been left out. This fourth edition is a splendid handbook of surgical and medical anatomy, and also of operative surgery. It should be a splendid text-book for the student, and will afford the practitioner the means of rapidly reviewing the most important parts of anatomy.

W. A. S.

Vaccine and Serum-Therapy. By EDWIN H. SCHONER, Assistant Professor of Parasitology and Hygiene, University of Missouri, C. V. Mosby, St. Louis. 131 pages. \$2.00.

This short work offers the busy practitioner a summary of modern views on immunity, and the practical application of bacterial vaccines and serums in the treatment of bacterial diseases.

The theoretical consideration of Ehrlich are dealt with in brief, also opsonins and their nature. The use of bacterial vaccines comes in for more extended consideration.

The author attempts to treat in too small space several large subjects; nevertheless, much valuable information is imparted.

G. W. R.

The July number of the *Annals of Surgery* will be the biggest number of any medical journal, so far as we know, ever issued.

There will be 26 articles, representing the choicest collection of papers presented at the meeting of the American Surgical Association, held at Philadelphia, June 1st to 3rd.

This will make about 344 pages—almost the size and value of a \$5.00 book (regular issue contains 144 pages)—an extravagant number of illustrations, bibliographies and case histories.

No announcement has heretofore been made of this very unusual number, and this will be as big a surprise to our readers as it will be to the rest of the medical and surgical world.

The value of this number, we are convinced, will be readily recognized by you, and will, no doubt, be of considerable interest to all our readers.

Dominion Medical Monthly

And Ontario Medical Journal

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Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 203 Beverley St., Toronto, Canada

VOL. XXXIII.

TORONTO, JULY, 1900.

No. 1.

COMMENT FROM MONTH TO MONTH.

Not since the introduction of the stethoscope has there been such another great advance in the study and elucidation of normal and abnormal conditions of the heart as Dr. James McKenzie, of London (late of Burnley), has recently given us in his work on Diseases of the Heart. The essentials of his method of investigation are the study of the movements of the radial and carotid arteries, of the jugular vein, and of the heart's apex beat during a cardiac cycle. Graphic methods are employed, and by the study of sphygmographic tracings of the vessels and of the heart in normal and abnormal states, he has succeeded in interpreting many hitherto obscure irregularities of cardiac action. The various arrhythmias have been classified on considerations of the minute anatomy of the heart, and in the main referred to altered function of the auriculo-ventricular bundle of His—that great conducting path from auricle to ventricle. The Tachycardias and Bradycardias have also been referred to disordered function of this or another part of the heart. Broad-minded clinician as he is, he does not discount the great importance of a close observation of the general condition of the patient, and a thorough consideration of his vascular system by means of well-established methods, but he believes that no accurate conception of the heart's action can be arrived at in many cases without the study of sphygmographic tracings. This study he has facilitated by the introduction of two instruments—one a modification of Dudgeon's sphygmograph, and the other a new instrument of his own device that enables the observer to take simultaneous tracings in ink of any two of the following: heart's apex beat, radial

artery, carotid artery, and jugular vein. As he points out in his work, such an investigation enables one to learn the action of right auricle and right ventricle and left ventricle, whereas the radial tracing only tells us of the activity of the left ventricle during systole.

His work is of the highest scientific importance, and offers the practical physician a means of thoroughly understanding his patient's condition. It is true that little aid to treatment has resulted from these studies, but accuracy of prognosis, good or bad, has been greatly facilitated, and it is not at all improbable that further investigation with these new methods will much advance cardiac therapeutics beyond our present knowledge.

GEO. W. ROSS.

The Manitoba Medical Association met in Brandon in their first annual session, June 22nd and 23rd. As regards the profession of medicine at large throughout Canada, the feature of the meeting was the adoption of the following resolution: "That this Association affiliate with the Canadian Medical Association by subscribing to its constitution, by-laws and code of ethics, and the members of this Association shall be, *ipso facto*, members of the Canadian Medical Association. The financial arrangements shall be left to the Executive Committee." Now that the Provincial Medical Associations are falling into line by unanimous vote to affiliate with the Canadian Medical Association, it indicates a strong feeling amongst the members of the medical profession in Canada for a rapid, complete and workable organization of the entire medical profession of the Dominion.

The Meeting of the Ontario Medical Association in Toronto in June was a pronounced success. The President, Dr. H. J. Hamilton, may well be congratulated upon it being so. It is certainly a distinct honor to be president of an Association which voices its satisfaction through its numerical attendance. It was however, more than a success in the quality of the papers produced and the animated and interesting discussions these engendered. In this it was highly educative. About the only hitch occurring was over the election of the Nominating Committee. The Toronto members have long sought to obviate the tendency to the election of too many Toronto men on this important committee. They wish to see the other places in the Province get proper representation. Some Toronto men have been elected on this committee

year after year, for fifteen years. The constitution is not at fault, but the system pursued. If nominations were called for, as they should be, then, Toronto men, as others, would have the opportunity of nominating candidates, and there could very easily be elected representatives from all over the Province. The method of handing out ballot papers for election should cease, and they should only be passed around when the nominations have been made orally. Every man has then a chance to vote intelligently.

Distinguished guests are invited to come and deliver addresses or read special papers. They pocket these, and hie away home, or publish them in foreign medical journals. This, to say the least, is a breach of etiquette, treats the Association with scant consideration, and casts upon our own journals undeserved opprobrium. Our journals may or may not be considered first-class, but we are not going to have first-class medical journalism in Canada if our guests are going to treat our Association and our medical press in this manner. If our medical press is good enough to publish notices of these meetings, month after month, before the actual date of the meetings, advertising they are quite as good to publish the transactions. If Canadians would support their own medical press rather than deery it, it would be much better. It is very doubtful if even an official journal of the national medical body would thrive under like treatment. We say, then, support and encourage; do not knock.

That the Canadian Medical Association meets in Winnipeg from August 23rd to 25th, everybody now knows. Even those members of Parliament who did not know that the national medical body had met in the last ten years, when incorporation was being sought, should know this—that is, if they pay for our single Canadian medical journal they “take.” The Provincial Associations are expressing themselves as favorable to affiliation. The profession is alive to organization and consolidation. Great questions of the intensest importance are before us. We can only achieve success in any way by ever keeping before us “in union there is strength.” We are uniting; then we will be strong—strong to promote Dominion Registration, strong to prosecute the pure milk campaign, strong to promote a Department of Public Health. Let us then pin our faith in ourselves, in our own Associations, in our own colleges, in our own men, in our own literature, and in our own press. Cease quoting others. Learn to quote Canadians.

News Items

DR. RIDLEY MACKENZIE, Montreal, has gone on a visit to Scotland.

DR. A. B. WELFORD is the new President of the Canadian Club of Woodstock.

DR. CHAS. TORTON has purchased the practice of Dr. Towle at Springbrook, Ont.

DR. W. B. THISTLE, Toronto, has gone on a visit to Seattle and Pacific Coast points.

AT THE recent meeting of the Ontario Medical Association, there were 350 present.

DR. ERNEST JONES, Toronto, will spend the summer abroad, visiting the neurological clinics.

DR. T. G. ROBBICK, Montreal, on account of ill-health, will spend the summer in Europe.

THE Ontario Medical Association will meet next year at Niagara Falls. This is a good move.

A CITIZEN of Montreal has donated \$125,000 for the purpose of a Tuberculosis Sanatorium in the Laurentians.

DR. C. A. PATTERSON, of Toronto, will take charge of Dr. H. N. McCordie's practice in Forest during his absence in the West this summer.

DR. JAMES R. LEFOUZE, of Goderich, has passed the examinations of the Royal College of Physicians and Surgeons, Edinburgh and Glasgow.

DR. B. E. HAWKE, 21 Wellesley Street, Toronto, begs to announce that he will in future confine his practice to diseases of the anus, rectum and pelvic colon.

THE Ontario Government has appointed Dr. H. C. Elliott, of Cobourg, official examiner of lunatics for the United Counties of Northumberland and Durham.

DR. H. R. CASGRAIN, Windsor, has been elected President of the Ontario Medical Association, with Dr. H. B. Anderson, Toronto, 1st Vice-President, and Dr. F. A. Clarkson, Toronto, Secretary.

THERE died recently at his home in Stratford, Dr. J. M. Dunsmore, at the age of 77 years. The deceased in his prime possessed a brilliant mind, and was well informed on many subjects outside his own profession.

DR. JAMES BELL, Montreal, is to deliver the address in Surgery at the Canadian Medical Association, to be held in Winnipeg August 23rd to 25th, while Professor J. George Adami, Montreal, will deliver the address in Medicine and Pathology.

DR. JAMES S. SPRAGUE, who for thirty-six years has resided in Stirling, Ont., and is well known as author of "Medical Ethics and Cognate Subjects," and as an examiner from 1903 to 1907 in Materia Medica and Pharmacy for our College of Physicians and Surgeons, and as a frequent contributor to our columns, will, in July, move to Perth, Ont. Personally acquainted with him, we recommend him to our Perth M.D.'s.

THE attention of those who contemplate taking the course of Medicine in the University of Toronto is called to the following regulation, which will appear in the calendar shortly to be issued for session 1909-1910: "Candidates for a degree must pass the Junior Matriculation Examination, unless (1) they possess a degree in Arts, not being an honorary degree, from any Canadian or British University; or (2) have already matriculated in the faculty of Arts or in the faculty of Law in this University; or (3) have been registered as matriculates in the College of Physicians and Surgeons of Ontario. Candidates are required to complete Matriculation before beginning their medical studies." Students will therefore observe that in order to register in the Faculty of Medicine this coming autumn, it will be necessary for them to have their Matriculation complete in every detail.

Publishers' Department

INFLAMMATORY DIARRHEAS. In discussing this subject we will speak of inflammation of the small and large intestines as a single disease. And, without taking up the reader's valuable time in discussing etiology and symptomatology, we will proceed at once to consider the medical treatment. The first step in this direction is to thoroughly evacuate the intestinal contents, and for this purpose no drug or combination of remedies has in our hands given the satisfaction that calomel has. Usually for a child of two years three grains are ordered rubbed up with sugar of milk and made into three powders and one administered every hour until all are taken, after which an old-fashioned dose of castor oil is given, which will produce several copious actions from the bowels. Then I order a high enema, composed of the following: Glyco-Thymoline one part, lime water one part, and distilled water two parts; about one pint of this solution is thrown well up into the bowel through a long rectal tube, and allowed to remain until evacuated.

Experience has taught me that Glyco-Thymoline exerts a beneficial action over the inflamed intestinal mucous membrane. For a child under two years old I order thirty to forty drops in a tablespoonful of water, administered internally every four hours, and have found that it acts as an intestinal antiseptic and astringent, not affecting the normal digestive juices. Glyco-Thymoline has a curative action when administered in catarrhal conditions of the bowels. It acts not only by lessening secretions, but also by retarding absorption of toxins and inhibiting septic organisms, restoring the integrity of the intestinal mucous membrane. We know that the principal lesions in this class of intestinal disorder are located in the colon, and that this part of the alimentary tract is the seat for the rapid absorption of poisonous toxins. When this idea first occurred to me I at once concluded that lavage of the bowel with an antiseptic (alkaline) solution was rational and would prove a valuable factor in the treatment of this class of enteric disorders. Lavage not only removes fecal accumulations and products of fermentation, but it clears the mucous membranes of the bowels, thereby promoting rapid healing. Another important point to be observed in the successful handling of these little patients is the dietetic management. —*William Edwards Fitch, M.D., Lecturer on Surgery, Fordham University School of Medicine, New York City.*

TREATMENT OF INTESTINAL AFFECTIONS.—In the latest edition of his "Practical Therapeutics," Professor Hare says that salol "renders the intestinal canal antiseptic, and so removes the cause of the disorder, instead of locking the putrid material in the bowel, as does opium." He regards salol as "one of the most valued drugs in the treatment of intestinal affections." When we add the antipyretic and anodyne effects of antikamnia we have a happy blending of two valuable remedies, and these cannot be given in a better or more convenient form than is offered in "Antikamnia and Salol Tablets," each tablet containing $2\frac{1}{2}$ grains antikamnia and $2\frac{1}{2}$ grains salol. The average adult dose is two tablets. Therefore, we conclude that to remove the cause, *i.e.*, to render the intestinal canal antiseptic, we have an invaluable remedy in salol; while to remove accompanying pain, to quiet the nervous system, and to reduce any fever which may be present, we have a remedy equally efficacious in antikamnia; an ideal combination for the treatment of this large class of diseases.

ALCOHOL.—The price of alcohol still remains very high, and this accounts for the exorbitant prices often charged for prescriptions. Most of the alcohol is used externally, in liniments, etc., and it seems unnecessary that this high-priced alcohol should be used for these external purposes. The principal hospitals have for the past few years been using an external alcohol—"Columnian spirits"—a chemically pure methyl alcohol, free from all acetone and objectionable oils, which are entirely removed by many distillations, and highly rectified, leaving it perfectly pure and without odor, and have proved, beyond a doubt, that its use for baths, spongings, back-rubs and liniments is highly beneficial. It is a better solvent, and is claimed to be more antiseptic than the ordinary alcohol, made by fermentation, and we find numbers of eminent physicians prescribing it wherever the preparation is used externally. It may be of interest to know that Squires' Companion to the British Pharmacopoea prescribed crude methyl (or wood) alcohol internally in doses from five to ten minims, and also the last edition of the British Pharmaceutical Code, prescribed pure methyl alcohol internally, in doses from thirty to sixty minims. The manufacturers do not recommend its internal use, but for all external uses it is superior in every way to the common grain spirit on the market to-day, which often contains a very noticeable quantity of fusel oil, which is highly injurious. Columnian Spirits is put up in small, sealed, original containers, especially for physicians, by the Standard Chemical Company, of Toronto, Limited, sole manufacturers.

MODEL MILITARY CAMP. Entirely New Features of the Military Display at the Canadian National Exhibition. That Model Military Camp at the Canadian National Exhibition, Toronto, is an entirely new feature in military displays in Canada. It will show every arm of the service, including infantry, cavalry, artillery, intelligence corps, army medical corps and engineers, with all their arms and equipment. There will be heavy field guns and rapid-fire guns of all the latest designs, and pontoon bridge-building by the engineers. The camp will be occupied by the Royal Canadian Regiment, and there will be a concert in camp every afternoon by the band of the Royal Canadian Horse Artillery, of Kingston.

BUSINESS CONTINUED AS FORMERLY.—Although death has removed Mr. James Authors, the founder of the firm of Authors & Cox, manufacturers of Artificial Limbs, Trusses and Deformity Appliances, the business will go along as formerly under the management of Mr. T. J. LeCras, Mr. Authors' son-in-law, who has been actively engaged in the management of the business since Mr. Authors' retirement from active business life some years ago. Mr. LeCras has had a wide experience in the manufacture and fitting of artificial limbs, trusses and deformity appliances, extending over 26 years, part of which time has been in the United States, but latterly, for the past ten years, he has been associated with this firm, and closely identified with its conduct. Mr. LeCras has a firm grasp of all the details of the business, both scientific and mechanical, having worked up from the bench, and later carried on careful scientific and anatomical studies, which thoroughly fit him for properly applying such knowledge as he has acquired. Patrons of this enterprising firm are assured of the same careful and expert attention and superior workmanship in everything of their manufacture that has marked their past dealings. Their factory is up-to-date in every respect, all the latest and best machinery for their purpose having been installed, and only competent, trained men are employed. Office and factory, 135 Church Street.

ENTERO-COLITIS AND CHOLERA INFANTUM.—The following advice from the pen of a well-known Denver physician will be found to be most seasonable and helpful in the treatment of enterocolitis: "Cleanse the intestinal tract with calomel and a saline, or with castor oil. Prescribe a suitable diet, easily digested and non-irritating. Irrigate the rectum and colon at suitable intervals with normal salt solution, or some mild antiseptic, using for the

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purpose a soft rubber catheter or colon tube. Instead of opiates, which lock up the secretions and thereby favor auto-intoxication, relieve the muscular rigidity and the excruciating pain which is such a drain upon the vital forces by the use of Antiphlogistine as hot as can be borne over the entire abdominal walls, and covered with absorbent cotton. If the patient is not too far gone, the effect will be astonishing. The little drawn-faced patient who, until now, has been suffering severely, will in most cases soon quiet down; the agonized expression will leave the face, and restful slumber supervene, thus starting the child upon the road to recovery."

SPECIALS FOR HORSES.—Show the Widespread Reputation of the Horse Show at the Canadian National. The special prizes offered in the breeding classes at the Canadian National Exhibition, Toronto, this year indicate the widespread reputation of the horse exhibit. The Ontario Jockey Club donate \$100.00 to the thoroughbreds. Medals are offered in the Hackneys by the English Hackney Horse Society and the American Hackney Horse Society. In the Clydesdales, Mr. Geo. A. Ferguson, of Surradale, Scotland, gives an additional \$25.00 to the champion stallion, while the Clydesdales Association give specials of \$50.00 to the best stallion, any age, and best mare, any age. In Shires, the Shire Horse Society of England give a \$50.00 gold medal for the best stallion or entire colt, and another of equal value for the best mare or filly. These are just a few of the many evidences of the world-wide reputation of the Horse Show.

A NEW BOOK.—Dr. Robert Gray, of Pichucalco, Mexico, has written a most interesting book to which he has given the appropriate title, "Specific Medication." The book is full of facts that are of inestimable value to every physician. Dr. Gray is one of the oldest physicians in Mexico, and he has won the respect of the medical profession everywhere by his valuable contributions to medical literature. Dr. Gray gives in the most open manner his experience with many drugs. About one remedy, with which many physicians are acquainted, Anasarcin, Dr. Gray is very emphatic. He says: "Anasarcin.—This has cured for me some of the most fearful cases of dropsy that I ever saw in all my long experience, not having failed me once." These words, strong as they are, will strike a responsive chord in the hearts of many physicians who have had similar experiences. Dr. Gray's book is sent out as a message of truth to the profession with no apologies, and it will find many appreciative readers. —*Therapeutic Record*, April, 1909.

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXIII.

TORONTO, AUGUST, 1909.

No. 2.

Original Articles

OUR PROFESSION AND THE LAITY IN PREVENTIVE MEDICINE.*

BY H. J. HAMILTON, M.D., TORONTO.

I have a deep sense of appreciation of the honor you have done me in electing me to the Presidency of the foremost Medical Association in Canada. I am conscious of the fact that the profession in Ontario has no greater honor to confer upon one of its members. The status of this Association, however, is such that the honor carries with it grave responsibilities which I have endeavored to discharge, as well as I am able, to your satisfaction, and in the interests of the Association. If I have failed in this, I crave your indulgence.

On reviewing our history from the date of our organization in 1881, I entered upon the duties of office with a great deal of temerity. The list of past Presidents, the part they have had in the development of the Association since its inception, and the high point of excellence which it has attained, not only inspired me with awe, but stimulated and encouraged me to try to make this meeting an unqualified success. I cannot speak too highly of the support which has been rendered by the committees and the membership of the Association. It is with pardonable pride that I present to you the results of the combined labor of all, viz.: the best programme ever provided for our annual meeting. In passing I would thank the Secretary for his untiring efforts during the past year.

In addressing the audience before me, it is superfluous to refer

*Presidential Address, Ontario Medical Association, June, 1909.

to the benefits derived by the profession from our meetings. Those who attend know all about this. For those who never come to such gatherings, I would quote from Hamilton Mabie:—

“The development of one’s personality cannot be accomplished in isolation or solitude; the process involves close and enduring association with one’s fellows. If work were merely a matter of mechanical skill, each worker might have his cell and perform his task, as in a prison. But work involves the entire personality, and the personality finds its complete unfolding, not in detachment, but in association.”

Surely the education and development of a member of our profession should not cease when he graduates. Both constitute a life-long process, and true success in the individual will depend upon the consideration which he gives these essentials. I use the words education and development in their widest meaning. Professional education alone to the exclusion of that development which conduces to make a man broad, to give him a mature knowledge of human nature, and a soul full of sympathy for his patients and the general public will not place us where every member of our profession should stand.

In meetings such as this much has been said about our conduct towards each other, and it is sometimes not what it should be. Conscientious work combined with abnegation of self in the interests of suffering mankind would ultimately result in such a general application of the Golden Rule, that we would credit each other with such honesty of purpose, that we would be less inclined to misunderstand each other. Conditions in our profession have so materially improved during the life of this Association that only a passing reference may be made to this subject. To quote from our code—“Diversity of opinion and opposition of interest may in the medical, as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a Court-Medical.” My interpretation of that article is, that if Dr. A. is of the opinion that Dr. B. has used him unprofessionally, Dr. A. should endeavor to have that misunderstanding “immediately terminated” by conferring with Dr. B., and only refer the matter to the Court-Medical after such effort to arrive at a proper understanding has proven futile. Furthermore, if Dr. A., smarting from a supposed “injustice at the hands of Dr. B.,” resorts to the Court-Medical without trying by conference with Dr. B. to amicably settle the difference of opinion, he himself is the aggressor.

Although conditions in our profession are much better than they were at one time, there is still room for improvement. Let us become better acquainted with each other, meet each other more frequently, reach a higher level, and avoid making careless remarks when speaking of each other; remember the good and ignore the evil, if we know or suspect that such exists. Regular attendance upon this and similar Associations would do much to keep down petty jealousy and strife. By attaining the ideal in this and combining our energies in work for the benefit of humanity, even much more would be accomplished than has been up to the present time. Let us forget all disturbing elements in our profession and keep before us the motto of this Association:—"Concordia Crescimus."

What are we doing for the public?

The following quotation from MacFie's "Romance of Medicine" gives some examples of what modern science has spared the public from:—

To cure dropsy. "Take a good quantity of black snails, stamp them well with bay salt, and lay to the hollow of the feet, putting fresh twice a day."

To cure ill eyes. "Take two or three lice, and put them alive into the eye that is grieved, then shut it close. The lice will certainly suck the web out and afterwards, without any damage to the patient, come out."

For dysentery. "Take the bone of the thigh of a hanged man (perhaps another will serve, but this was made use of). Calcine it to whiteness. Dose: a dose of white powder in some red cordial."

Earthworms, woodlice, human skull, and other loathsome things were favorite prescriptions of the time.

The same writer tells us that according to Sir Thomas Browne's discourse upon this subject, Italy confirmed the fact that prepared mummy was frequently used by the ancients as a medicine. We are told that it was prescribed for epileptics and gouty subjects. Francis the First of France always carried mummies with him as a panacea against all disorders.

"But the common opinion of the virtues of mummy bred great consumption thereof, and princes and great men contended for this strange panacea, wherein Jews dealt largely, manufacturing mummies from dead carcasses and giving them the names of kings, while species were compounded from crosses and gibbet-leavings. There wanted not a set of Arabians who counterfeited mummies so accurately that it needed great skill to distinguish the false from the true. Queasy stomachs would hardly fancy the doubtful potion wherein one might so easily swallow a cloud for his Juno and defraud the

fowls of the air while in conceit enjoying the conserves of Canopus."

We, as a profession, are making honest efforts to help the public. Progress in medicine has for its aim not only the cure, but the prevention of disease. Reforms in this latter particular are not always met kindly by the laity, nor in fact accepted without proof by the profession. It is at least safe to be cautious, but let us hope that never again will any movement in preventive medicine meet with such bitter opposition from the profession as did vaccination when introduced by Jenner.

Vaccination, providing immunity against smallpox, is so firmly believed in, that at this date one should apologize for referring to it. The subject is no longer one for debate. Life is too short to enter into controversy upon that which is just as true as the fact that 2 and 2 make 4. Japan, not more than 30 years of age in medical progress, recognizes the necessity of adopting compulsory vaccination with the result that smallpox, once a scourge, has become easily manageable in that country. I refer to Japan as an example of a nation where compulsory vaccination is insisted upon when a child enters school. Medical inspection of schools is also carried out. The same may be said of Honolulu and other places which we have believed to be not as far advanced in medical science as we in Canada are. At the present time compulsory vaccination is a dead letter in the public schools of Toronto.

Our profession and this Association have frequently with no uncertain sound voiced their opinion in reference to this state of affairs. The public for whom we are working are either indifferent as to ultimate results or ignorant upon the subject. The awakening will be extremely rude when it comes, as it certainly will come.

Pasteur in more recent times conferred a boon upon mankind by providing a serum which rendered one bitten by a rabid dog immune to hydrophobia.

Mark the difference in the reception given by the public to his discovery and that accorded to Jenner's theory of vaccination. This may in part be due to the fact that vaccination against smallpox was given to the world when the laity, and even our own profession were less able to grasp the meaning of it than at the present time. It may also in part be due to the fact that Pasteur's serum is used only when there has been exposure to rabies. The public can see then the wisdom of protecting themselves against hydrophobia, the disease most terrible to the popular imagination. They know that the bite of a rabid dog is fully expected to result in hydrophobia, and they will resort to the remedy at once and without question. I doubt very much whether there is a solitary member of our Board of Education who would decline to undergo treatment immediately.

if bitten by a mad dog. No, not even for the sake of appealing to popular prejudice, if such existed, would he do such a foolish thing. It is safe to say that there is no prejudice against the use of Pasteur's serum. Must men be infected with a disease which is necessarily and rapidly fatal before they will consent to use the remedy? Rabies—horrible and terrorizing to contemplate, but comparatively rare in occurrence—fatal. Yes, the argument is convincing—Pasteur's serum prevents—we will be advised by our physician, and even consider him a fool if he does not send us to New York at once.

Smallpox—vile, loathsome, extremely contagious, large numbers attacked when there has been no immunity previously provided, wiping out the population of large cities by thousands but recovery possible in a proportion of cases—no, we may not be infected, and if we are infected, we may recover. We will not be vaccinated, nor have our children vaccinated, nor will we require children attending school to be vaccinated. It would lose some votes for us on January 1st, we are afraid. Thus in this disease the health of the public is allowed to be a political football. Nothing short of a frightful epidemic of smallpox which decimates our population will prove to these men the efficacy and wisdom of vaccination.

One hundred years ago or a little more one anti-vaccinationist asserted "smallpox is a visitation from God, but the cowpox is produced by presumptuous man; the former was what Heaven ordained, the latter is perhaps a daring violation of our Holy Religion." Of the two v's in that quotation, all I have to say is, neglect the violation, and you will sooner or later get the visitation.

Vallery-Radot says, "One day Pasteur, having wished to collect a little saliva from the jaws of a rabid dog, so as to obtain it directly, two of Bourrel's assistants undertook to drag a mad bull-dog, foaming at the mouth, from its cage. They seized it by means of a lasso and stretched it on a table. These two men, thus associated with Pasteur in the same danger with the same calm heroism, held the struggling ferocious animal down with their powerful hands, whilst the scientist drew, by means of a glass tube held between his lips, a few drops of the deadly saliva."

This was heroism to be sure, but what of Jenner who inoculated his own child of 16 months with swinepox? What of the heroism of Pasteur's second patient, a boy of 14 who was bitten while protecting his comrades? "Armed only with a whip he confronted the infuriated animal, who flew at him and seized his left hand. After a tremendous struggle, during which his hand was badly bitten, the boy succeeded in overpowering the dog, bound its jaws together with the whip, battered in its head with his wooden sabot, and finally dragged it to a stream and held its head under water till it was

undoubtedly dead." This boy recovered as did the first. Our profession has given men who in these two diseases have accomplished untold good for the public, but the Jenners and Pasteurs of to-day are working just as faithfully for mankind as ever they did.

In tuberculosis the laity are now the faithful allies of the profession, and while much has been accomplished in this disease, it remains for the powers that be to make more universal use of the educational campaign which has been going on now for some years and supplement the efforts of the profession and public. They are doing this as rapidly as seems to them wise. It is expected that the municipalities will take an active hand in this.

I would enlist for our profession the unbounded confidence and sympathy of the laity in our efforts to secure for all pure air, pure food and pure water. During the immediate past we have been making rapid advance in that respect. The Local Legislature is co-operating with our profession with commendable zeal in reference to the milk supply of the Province. As a result of Mr. W. K. McNaught's most excellent resolution passed by the House, a Provincial Milk Commission has been appointed. This subject has occupied Mr. McNaught's attention for some time and has had the hearty support of the Minister of Agriculture and others in the Cabinet. With such an able Commission and equally able and enthusiastic Department, we may be satisfied that before this Association meets again, much will be accomplished.

During the past year the Milk Commission of the Canadian Medical Association has been doing good work. Locally the Milk Commission of the Academy of Medicine has been successful in doing more than we could have reasonably expected from a body of men busy with the routine of medical practice. These men have given of their time and energy most generously, with the result that it is now possible in the City of Toronto to purchase certified milk which must reach the standard of purity required by that Commission.

From the daily press we learn that Mr. John Ross Robertson, that good old protector of sick and helpless children, has recently been most active in securing for Toronto the establishment of infant milk stations which will provide pasteurized milk for 1,000 children daily during the coming summer. With a well selected delegation of physicians Mr. Robertson recently visited New York and consulted Mr. Nathan Strauss at his laboratory, with the result that a pasteurizing plant has been ordered and will soon be installed by Dr. Arthur Randolph Green of New York. Recently the Medical Society of the City of Hamilton appointed a Milk Commission to

look after the supply there. These are examples of what is being done in other places throughout the Province, and we point with pride to the fact that our own profession is leading in the movement.

In reference to the water supply of the City of Toronto, last January the electorate passed a by-law authorizing the expenditure of a large sum of money in a system of disposal of sewage by septic tanks and for a filtration plant for our water supply. At the time of writing some members of the council are opposing the scheme, but we can confidently hope that this opposition and delay result from some misunderstanding, which will soon be cleared up. When the people know and say what they want, they will certainly get it. They have said it—and the medical profession have helped them to learn the necessity of having pure drinking water.

The public were never so well informed in sanitary matters as they are to-day and were never so eager to learn more from us in these things. The time is coming when they will not ask what it costs to secure pure food and pure water, but they will ask how to get it at any cost.

Life Insurance Companies should be foremost in the campaign against preventable diseases. Prof. Irving Fisher, of Yale University, said:—"It is sound business for the Life Insurance Companies to work for the prevention of disease, just as it is sound business for Fire Insurance Companies to work for the prevention of fires. By this method the Insurance Companies will increase the duration of life of their policyholders and thus be financial gainers." Can they be induced to help in the fight against tuberculosis and typhoid fever?

To Sir A. E. Wright belongs the credit of applying vaccination as a means of preventing typhoid fever.

Statistics available in 1907 were based upon inoculation on British troops in India and South Africa. Sir A. E. Wright quotes figures as follows:—Among 19,069 inoculated soldiers there were 226 cases of typhoid fever—a proportion of 1 in 84.4; among 150,231 uninoculated soldiers there were 3,739 cases, that is 1 in 40 took the disease. In the inoculated the mortality was 17%. In the uninoculated the death rate was 25%. The immunity seemed to persist for about two years. Chantemesse reports a death rate of 17% in 5,621 cases of typhoid treated in Paris Hospitals from 1901 to 1907 without inoculation, and since that time 1,000 cases treated in his wards with cold baths and anti-typhoid serum with a death rate of 4.3%. Not one fatal result occurred when the serum had been used within the first seven days of the disease. Convalescence was very rapid in patients treated early. This practice has also been adopted in the German Army with good results.

Up to the present the evidence would go to prove that the use of anti-typhoid serum is advisable among soldiers and other large bodies of men who are surrounded by unknown or suspicious sanitary conditions. An effort has been made in this address to refer to some things our professions are trying to accomplish for the public in preventive medicine. If to this aim on our part we can add the confidence and co-operation of the public the results will be more satisfactory in the future than they have been in the past. To this combination of profession and laity we can safely add the support of the Legislature, a body elected by the people, and willing to grant what the majority of the electorate desire of them.

The confidence and co-operation of the public can only be secured when they understand the necessity of the work. The surest way of educating the public is to start with the rising generation. The Legislature of this Province now empowers school trustees to provide and pay for medical inspection of schools. To this add the teaching of hygiene in the schools.

The primary object of medical inspection of schools is to prevent children from contracting or giving to others communicable diseases. In the second place the object is to detect mental and physical defects, that they may be properly cared for, and not allowed to interfere with the child's progress in school.

This, followed by teaching in public health as far as their age and education will permit would do much to relieve a great deal of distress and diminish our death rate. If a child could tell his parents what could be done for the prevention of tuberculosis by proper disposal of sputum, and the adoption of proper hygienic measures, the time and money expended in teaching them these things would be well spent. The same would be true if every child could explain to his parents why it was better to boil the drinking water and why certified milk is cheaper in the end than milk of doubtful quality. If the children were able to demonstrate to their parents that tuberculosis and typhoid fever are preventable diseases, much more would be done towards educating the masses. The homes must be reached, and that can be done more readily, if we have a good system of medical inspection of schools and instruction in hygiene.

Sir Victor Horsley in addressing the British Medical Association refers to medical inspection of school children as one of the primary questions of the day, and says, "Here is a department of national work for which alone the medical profession can be and is responsible."

Our Department of Agriculture each year spends a great deal of money on animal and plant life because they, as representatives of

the people, carry out the wishes of the people. If the Local Government do not spend as much money in caring for the health of the children of this province as they might it is because the people are not ready to permit it. In the matter of medical inspection of school children the Government has given school trustees the power to spend money for this purpose—it is now for the people to allow it to be done. It is to be hoped that the Department of Education will at an early date devise some workable scheme by which medical inspection will be carried on in a most effective manner.

Locally through the Academy of Medicine of Toronto our profession have been endeavoring to accomplish something in the matter. There has just been published in the *Lancet* the report of a committee appointed by the Academy upon medical inspection of schools. The Secretary, Dr. Helen McMurchy, has been most untiring in her efforts to secure information regarding what has been accomplished by medical inspection in the United States and Europe. I would recommend the careful perusal and consideration of this report. It is our duty to not only help in this work but to direct it. It certainly opens up a very wide field in the realm of preventive medicine.

THE ADVANTAGES AND DISADVANTAGES OF PASTEURIZED MILK.*

BY JOHN A. AMYOT, M.D., TORONTO.

Frankly, ladies and gentlemen, I have come before you to advocate the pasteurization of milk. I have given the question the most serious study I am capable of. I hope to strengthen those who believe as I do, to convince some, and to make the rest hear the evidence on which I base my conclusions. Positive evidence is difficult to obtain. Problematical evidence is abundant. The things we know positively in this under-world are few. We have hypotheses and theories about many things. The open mind is a godly possession.

Milk is an organic substance. Practically all organic substances are subject to decomposition, and most of these decompositions are due to the action of living micro-organisms. These living microbes are nearly omnipresent. They don't arise spontaneously. Pasteur

*Read before Ontario Medical Association, June 1st, 2nd, and 3rd, 1909.

showed us this. He showed us how these organisms could be killed, especially by heat, and that organic matter placed so that fresh microbes could not get to it could for all practical purposes be preserved indefinitely. At the Pasteur Institute in Paris can still be seen on exhibition enclosed flasks of unaltered urine, microbes only excluded, that were placed there away back in the sixties. He showed also that among bacteria there were two classes, showing distinct differences of resistance to heat and other germicidal agents.

Certain bacteria go into the spore or resting, or for our purpose just now, into the resisting stage. Many of these require a moist temperature at or above the boiling point of water for their destruction. Another class, like most living protoplasm not especially protected, are killed, depending on a variable and reasonable time of exposure at temperatures of from 55 deg. to 70 deg. C. (130 deg. F. to 158 deg. F.) These are spoken of as organisms in the vegetative state. Many varieties of bacteria have no other stage, and fortunately for us few of the bacteria pathogenic to man are spore-bearing ones.

For the preservation of wines and beers Pasteur advocated an exposure to a temperature varying from 55 deg. to 70 deg. C. (130 deg. F. to 158 deg. F.), for times varying from half an hour to an hour. The application of heat to organic matters at these temperatures has come then to be called pasteurization. He showed also how this method could be used to destroy spore-bearing organisms. This heat killed the vegetative ones. By leaving the substance at room temperature or at incubating temperature after cooling for twenty-four hours many of the spores developed into the vegetative stage. By repeating the heating process on three, four or five consecutive days, giving them the time between to vegetate, complete sterilization could be obtained. We do this in the laboratory when we don't want to alter the composition of our culture media.

The object of Pasteur was just that same thing I am advocating—to kill the organisms so as not to alter the delicate compounds and substances in these mixed organic substances. The best wine tasters in Paris (and they are pretty expert) could not discover any alterations in the wines.

When in the laboratory, we want to make bacterial vaccines, 60 deg. C. (140 deg. F.) for one hour is the temperature we employ. This certainly kills the organisms, but does not materially alter the very delicate proteids that we depend on in our vaccinations to produce opsonins, precipitins, agglutinins and so on.

"Pasteurization" is a much abused term, so much so and so frequently that Straus, one of the strongest advocates of the pasteurization of milk, is strenuously advocating the condemnation of "commercial pasteurization," unless it be put under strict official supervision, and be defined by law.

A temperature of 75 deg. C. (167 deg. F.) for one minute will certainly kill the tubercle bacillus, one of the most resistant of the vegetative pathogenic bacteria. A temperature of 55 deg. C. (130 deg. F.) for one hour will do the same; a temperature of 65 deg. C. (149 deg. F.) will do it in twenty minutes. Within limits, the higher the temperature the shorter the time required. Or again, within limits, the longer the time the lower the temperature.

But "the salt" must be put on to the "bird's tail." This is one of the great difficulties. A roast of beef, after an hour in the oven, is still rare in the centre. That means that this rare portion has not been raised to a temperature sufficient to coagulate it, in spite of the fact that the temperature of the oven has been during the whole time in the neighborhood of double the temperature of boiling water. Fluids, of course, are better conductors of heat than solids, but milk is more solid than water.

However, it is found in practice that milk in closed containers, where heat radiating germs cannot form on the surface, if exposed to a temperature of 65 deg. C. or 150 deg. F. for twenty minutes will have all its pathogenic bacteria killed. When we advocate pasteurization, this is the degree of heat we mean—65 deg. C. or 150 deg. F. for twenty minutes to the whole milk.

You will see this is not boiling the milk.

There is no positive chemical or physical evidence to show that this alters the milk. The taste is not changed; there is no odor acquired; there is no change in appearance; the cream line is not altered. Nor has anyone brought forward any real reliable evidence that the nutritive value of the milk is altered.

Some make the statement that scurvy and rickets are produced by feeding it. One hospital superintendent in New York told me they used it to cure rickets. They had never had a case of scurvy amongst their babies, though they used pasteurized milk—"had to" during especially the four summer months in all their cases.

Some German authorities have stated that calves fed on pasteurized milk did not fatten as well as those fed on raw milk. We have to keep an open mind on this subject.

If milk did not present certain very serious dangers, no one would advocate its pasteurization. If we admit, and mind it isn't proven, that some of its food value is altered, there is so much to compensate for the loss that the gain, I am sure you will agree,

quite overweighs any disadvantage there might be from this loss—(it can only be a slight loss).

Cow's milk just drawn from the udder is slightly acid, soon becomes neutral; then if lactic acid bacilli get into it (and they usually do) it becomes progressively acid until finally we can taste it. In cheese-making this is useful; the ripening takes place in the ordinary cheese from the products of these bacteria. But they serve another purpose. As the milk becomes acid, the other bacteria present are checked in their growth, even completely inhibited, and some are killed out. Now these lactic acid bacilli are vegetative bacteria (no spores). Pasteurization kills them.

The single heating that is given in pasteurization does not kill the spore-bearing organisms. The lactic acid bacilli being destroyed, these have the whole field to themselves. Most of them produce vile, even dangerous, substances of putrefaction, loosely called ptomaines.

This is one of the serious disadvantages of pasteurization, but one that can easily be got over. These putrefactive spore-bearing organisms have had quite a shock, and are reduced in number, and will take some time before they can get to multiplying again after a proper pasteurization. At a temperature of 7 deg. or 8 deg. C., or 45 deg. F., they will take several days to get a start, or get none at all. So that cooling is one of the precautions absolutely necessary in keeping pasteurized milk. We then ask that the milk be heated to 150 deg. F. for twenty minutes, and immediately cooled to at least 8 deg. C. or 45 deg. F., and kept at that until it is to be used, when you may heat it or do what you like with it, provided you don't take hours to do it.

There are two methods of procedure in pasteurizing milk—in container bottles or in bulk. The first is the proper method for the household or for institutions, the second for municipal supplies.

A very simple and unpatented apparatus, as devised by Straus, is an effective way of doing it at home or in the hospital.

The ordinary double-jacket spiral commercial pasteurizer, where the milk is thinned out into a layer of perhaps 1-30th of an inch to ensure uniform heating in 40 seconds, and then run from this into an apparatus for retaining the heated milk for the required time, with as little loss of temperature as possible, serves for commercial pasteurization. Welsman has devised a retainer, one of which is being installed by a large dairy in Toronto. One has been used successfully by the Sheffield Dairy, of New York, for a couple of years now. From this the milk is run to a coil cooler in a dust-free room, and refrigerated to the requisite temperature

previous to bottling in clean sterilized bottles, and then packed in cracked ice and placed in a refrigerator until delivered.

These methods add to the cost of the milk, but not more than one cent to the quart, and perhaps less.

Most commercial pasteurization is done in 40 seconds, followed by immediate cooling. Some little good is done, but the safety is often a delusion, a false security. Some firms don't trouble much about the temperature, and when rushed, put the milk through more quickly than this, and accordingly reduce the temperatures. Some of them heat it to 75 deg or 80 deg. C. (167 deg. F. or 176 deg. F.), but this is apt to alter the taste.

Many dairy people object to the retainer. They say they could not put through their thousands of quarts in the time at their disposal. The Welsman retainer only causes the initial twenty minutes' delay, for it runs continuously, once started. So that this objection of the dealer is met.

Commercial pasteurizing plants should be under the strict supervision of honest municipal authorities to see that they do not pasteurize dirty, unwholesome milk. This should never be used under any condition.

Straus, in New York, has been accused of pasteurizing dirty milk. This is false. Straus won't touch milk (else he would not get the results he does) that does not come up to the standard of nearly certified milk—30,000 bacteria per c.c.

Cow's milk is an excellent food for adults, or children. It is not the natural food for the baby. Any mother feeding her baby artificially increases its chances of death nine times over the naturally fed one. About one-quarter of these chances are due to the fact that cow's milk was not intended for human babies.

The cow develops her young in two or three years.

Each species of animal gives milk varying in composition according as to whether it is a herbivorous, a carnivorous, an omnivorous one; as to whether its young is intended to develop slowly or rapidly; as to whether it is to make up much bone in a short time (cow's milk is the best source of lactate of lime we have); as to whether it has to withstand much cold (the seal gives nearly cream). It is not a wonder, then, that cow's milk as a food, aside from any other consideration, does not agree in certain cases.

The great cause of mortality amongst children from cow's milk is due to other agents.

The double rate of mortality in the summer is due to putrid milk and activated bacteria, chiefly the *B. enteritidis* (ptomaine poisoning).

Pasteurized milk on Randal's Island reduced the summer month mortality to that of other months of the year, cut it in two. Rochester, by a supply practically of certified milk, milk gathered with the greatest precaution, got the same reduction—50%.

All milk, then, should come up to the standard of certified milk, or nearly. This costs fifteen cents a quart here in Toronto, twenty-five cents a quart in New York, and they don't make any money on it at that. Out of 85,000 quarts of milk used in Toronto, 50 quarts are certified milk. Maybe 300 quarts will be produced daily by the end of the year. In New York, after ten years' striving, 16,000 quarts, out of the 2,250,000 quarts sold, is certified milk.

It requires men with the training necessary to produce a clean surgeon to produce this milk.

A whole generation of surgeons had to die out before these clean surgeons of the day were produced, and some of them, through perversity, don't come up to it yet. What are you going to do with the ordinary help a farmer can get? Just try to realize it.

To produce certified milk, a commission of disinterested men who know what they want, and will take nothing else, is necessary to begin with.

The cows that produce the milk must be healthy. Milch cows are artificial beasts, their udders especially, and as such, more subject to pathological conditions than the plain animal. She has to be tamed and taught to live confined.

It is surprising how many of them and how often they get colds, acute rheumatism, mastitis and various other acute diseases.

They have to be tuberculin-tested, and this properly, every six months. Even with these precautions, the sacrifice from tuberculosis, with a healthy herd to commence with, is 10% a year in one of the best certified milk-producing plants I know of.

Where the tuberculin testing is done once a year, the loss from tuberculosis is greater; in some cases I know of 40%. The experience in the United States is, the farther you come north, the more the cattle are confined, the greater is the amount of tuberculosis, commencing with practically nothing in Cuba to 30% or even 40% in Northern New York.

This tuberculin weeding costs money.

Then the barns have to be something besides "bank barns," where the cows can get plenty of fresh air and sunlight, and where the dust can be controlled.

The water supply must be beyond question, and plentiful. The common long trough supply is bad, for one infected animal may

infect a good many. The stable has to be cleaned frequently, the manure far removed every day from the stable.

The animals must be isolated from other animals on the farm (no haphazard mixing). They must be curried and washed frequently.

The milkers must be clean and healthy, and come from healthy houses and families. In most big places the men, in order to accomplish this, have to be housed on the premises. They must be taught cleanliness of person and hands, wear practically surgically clean clothes.

The cows before milking must have their clipped hindquarters and udders washed well. You know well how difficult it is to get the hands and operating surfaces surgically clean.

The pails and strainers must be sterile.

A special milk house must be provided and constructed in such a way that dust may be excluded.

The dairyman must be a skilled man, for he has to have his cooler, bottler, bottles and caps as nearly absolutely sterile as possible. Nothing but a steam sterilizer will do this. He must also sterilize the outer clothes of the milkers, as well as the pails and stools they use, and must be provided with plenty of cooling water and ice to refrigerate the milk, which is then packed with cracked ice and kept in a refrigerator until delivered. *This is certified milk*, and are you surprised that it should keep for forty days, be sent to Europe and come back fresh, and cost twenty-five cents a quart; and again is it surprising that so little is produced?

Many of these precautions, you will say, are frills. If you don't take them, you can't get any quantity of certified milk with a count of 10,000 bacteria per c.c. or less continuously, and you start with a milk that has not more than perhaps 25 per c.c., sometimes even sterile. *You are dealing with one of the finest culture media for bacteria possible.* These bacteria double themselves in a half-hour or less. Keep them warm, as is ordinarily done, and you'll have a million per c.c. in a very short time.

When we lived on or near the farm we got our milk fresh. A city supply is at least 36 hours old when we get it—even older. Now, consider whether it is possible to get a general certified milk for the general public.

You know I need not rehearse the horrors—how dirty the usual barn is, how dirty the cows are, how dirty the cans are, how unsafe is the usual farm well, how untrustworthy is the usual farmhand, how the milk is left on the milk stands, how it is knocked around

in the cans, how it is delivered, and how it is taken care of in the ordinary house.

The consumer has to be taught how to take care of his milk. This is easier than to teach all the others.

Much improvement can be obtained by laws and regulations, by frequent and rigid inspection. Thirty thousand farms supply New York. It is said 1,400 supply Toronto. Now, just think for yourselves, as practical men, if this can be done, and when the millennium is going to come!

The prevention of putrefaction in milk is not the only object of pasteurization, though it is an important one. The great and chief object is to free milk from pathogenic bacteria.

The prevention of putrefaction could be attained by a little more rigid inspection and regulation than is generally done at the present time in most communities.

The milk producer could be taught how to prevent the entry of dirt (and thus bacteria) into his pails and cans, and have impressed on him the necessity of immediate refrigeration of the product after milking. The transportation companies might be induced to put on refrigerator cars. New York has succeeded. They had to dump many thousands of quarts of uncooled milk into the Hudson before this was accomplished. In smaller cities this might be more difficult. The railways usually meet any such request by saying, "Oh, the carrying of milk doesn't pay anyhow; we would be just as pleased not to handle it." And there you are.

However, moderately clean collection and immediate and continuous refrigeration will prevent putrefaction, if you can get it. In practice, we don't often succeed. Very few places have.

One objection to pasteurization that is sometimes made, is that if we allow this, our efforts to have clean milk produced will be set back. When will you get real clean milk? Will we have to go on dying until this is accomplished?

We mustn't forget the farmer in this. If the farmer kept books as strictly as the business man, he would give up milk production. Prof. Sedgewick, in this connection, says, "I advocate ten-cent milk." That means twelve-cent milk here. Then it will pay, and we can more justly make demands on him, and get at least what is called "inspected milk."

But to come back to the real object of pasteurization. Reliable experimental evidence, such as has been produced by the British Commission, the Berlin Commission, the Lyons and the Lille schools in Europe, and by Rosenau, Theobald Smith, Ravenal, Russel and others on this side of the Atlantic, shows that the bovine

tubercle bacillus is much more infective to man than Koch cares to admit. A great deal of our surgical tuberculosis is due to the bovine bacillus, and evidence is accumulating to show that much of our pulmonary consumption is due to it also. Tuberculosis is much more prevalent in milk cattle than is generally known. From a large series of milk samples in New York, 16% were found to contain living tubercle bacilli, as shown by guinea-pig inoculation. The Washington examinations have shown higher, and many other reliable observations have corroborated this. The tuberculin testing of fine herds has shown in some cases from 10% to 50% to be tuberculous, and even higher. This is general. The farther north the greater the percentage, and especially so where the milk business is carried out on a large scale. The blood of these animals has frequently shown the bacilli. A tuberculous cow, it does not matter where her lesion is, may give off, without lesion in the udder, tubercle bacilli to the milk. The udder is frequently infected.

The argument is sometimes made that intestinal tuberculosis is not so high as this general infection of milk would seem to bear out. Ninety per cent of human beings are tuberculous. Calmette's experiments have shown that tubercle bacilli can, and usually do, reach the circulation in experimental animals without discoverable intestinal lesion. In fact, in one half-hour after the ingestion of fat-suspended tubercle in dogs, the bacilli were found in the thoracic duct, and portions of the lung tissue by implantation into guinea-pigs produced tuberculosis in the pigs.

How many milk-producing cows are tuberculin-tested? Certified milk herds, where the test is done every six months, show anything up to 10% per cent. development between tests, and where the tests are done only once a year, from 25% to 40% develop.

Dr. North, himself a certified milk producer for four years, and who always uses certified milk in his own home, always pasteurizes it. Dr. Lewis, Medical Health Officer of Chicago, pasteurizes the certified milk he feeds to his children. How much more necessity there is then to pasteurize a general supply I will leave to you.

Human tuberculosis is transmissible to cattle. How many workers amongst cattle are infected? These cases would be far more infective to human beings, such being the origin.

Now, what is to protect a general milk supply from this disease but pasteurization?

The inspection of any milk herd will frequently show 10% of the cows to be suffering from mastitis of one form or another. A good percentage of milk samples show staphylococci and strep-

to cocci. Many of these are of the pyogenic type. It would take a pretty rigid and frequent inspection to exclude these alone from the milk supply. How many milkers would desist milking if they had a cold? How would inspection reach these?

You, practitioners of medicine, know how frequently scarlet fever cases occur on farms unrecognized, often unattended at all; and you know, too, how frequently these people are allowed to go on sending in milk. In cities we know that milk bottles are not very well sterilized, and that many of them come from infected houses to be mixed in with the others. The records show how frequently outbreaks of this disease have been traced to milk supplies. With diphtheria and measles the same thing happens.

Then typhoid fever—I have myself investigated outbreaks from milk. There are many of them on record that cannot be doubted. Typhoid is not always recognized. Carriers of typhoid germs, we know, are commencing to be shown to be not at all infrequent. Milk is a great medium to multiply the bacteria of this disease in, whether they come from the dirty sides of the cow, the infected hands of the milker, drowned infected flies, or from the infected wells of the dairy, to be distributed to the mixed municipal milk supplies. Rigid, frequent and honest inspection will exclude some of this. In Toronto we have a fairly rigid inspection, and yet a certain dairy in this city excluded two milk supplies ten days before the city authorities knew of the existence of typhoid fever on the farms concerned.

Now, when you think all this over, and realize the difficulties and the dangers, I think you will not be surprised that pasteurization is being so strongly advocated. Proper pasteurization will certainly remove all these dangers and many others; for, as was said before, the organisms of all these diseases are all, nearly without exception, vegetative bacteria, not spore-bearers, and are killed at the temperature advocated, in the time asked.

The disadvantages can be got over. The advantages outweigh them many times.

CRANIOTOMY VERSUS CESAREAN SECTION IN SLIGHTLY CONTRACTED PELVES.*

BY S. M. HAY, M.D., TORONTO.

Mr. Chairman, Ladies and Gentlemen.—When requested to take part in this symposium, I gladly consented when I learned that my part was to be "Craniotomy Versus Cesarean Section in Slightly Contracted Pelves." I did so the more willingly because I hold strong views on this subject, and was desirous of bringing them before this Association in a hope that the discussion might either establish me in my position or lead me to plainly see that some other method was preferable.

In the first place, allow me to say that pelvimetry has, up to the present time, been almost entirely neglected by those practising obstetrics. The time must come, and let it be soon, when the pelvimeter will be employed by the obstetrician just as the stethoscope is by the physician. What piano dealer would undertake to deliver a piano into your parlor without first having a measurement of your doors, windows and halls? Is not the delivery of an infant into a home of far more importance? How many take the trouble to have careful and exact measurements made of the passage the infant must come through? I am glad this subject is now being taught more thoroughly. Let it be practised more constantly.

If, on making the first vaginal examination of a woman in labor, the head be found at the brim, we should at once endeavor to obtain with the examining finger an estimate of the conjugate measurement, which in the majority of cases is the most important. This can readily be done without any mechanical instrument by passing into the vagina the first two fingers of the left hand, with the radial side toward the pubes. The second finger follows and examines the hollow of the sacrum as it passes upward until it rests on the most prominent part of the promontory of the sacrum. The radial surface of the hand is now brought close to the pubic arch, and this point noted or marked by the index finger of the other hand. Now measure the distance between this mark and the tip of the second finger, and you will have a good idea of the conjugate diameter. This simple method has many advantages, one being "your fingers are always on hand."

Approximately, the conjugate diameter of the pelvis is $4\frac{1}{4}$ inches.

*Read before Ontario Medical Association, June 1st, 2nd, and 3rd, 1905.

and the transverse $5\frac{1}{4}$ inches. A very slight reduction in these measurements, or a head slightly larger than the normal, may necessitate version or forceps. If, however, the conjugate be reduced to $3\frac{1}{4}$ or $3\frac{1}{2}$ inches, and the head not smaller than normal, it means the uterus cannot empty itself in the normal manner. Now, what are we going to do? There are several ways to be considered: (1) Premature labor; (2) Symphysiotomy; (3) Pubiotomy; (4) Craniotomy, and (5) Cesarean section.

Premature labor might be resorted to if we could be certain of the proper time to induce labor; but, if induced too soon, we endanger the infant's life; if too late, we still have the same case of difficult labor to deal with. With this uncertainty, we should hesitate to recommend the induction of premature labor.

Symphysiotomy and pubiotomy have a very limited field of usefulness, and, in my opinion, are rapidly losing favor, and should rarely if ever be employed.

In the large majority of cases with a conjugate of, say $3\frac{1}{4}$ inches, we have practically to decide between craniotomy and Cesarean section. Shall it be craniotomy? Certainly not, except in rare instances, unless the child is dead or dying. And it is often impossible to be certain that the infant is dead; so we accept a willingness to destroy it by this operation. Again, the pelvis may be so contracted that it may be impossible to deliver even a mutilated child.

The indications for craniotomy are:

1. A conjugate between $2\frac{1}{4}$ and $3\frac{1}{4}$ inches, and the child dead.
2. A conjugate above $2\frac{1}{4}$ inches, and in any condition that renders the delivery of a mutilated child the most conservative procedure, so far as the safety of the mother is concerned.
3. In any case where the child is dead and craniotomy offers a quicker and easier delivery for the mother than version or forceps.
4. Hydrocephalus—as here a living child by Cesarean section would probably die soon or live an idiot.
5. In an after-coming head, when very great difficulty is encountered in delivering it, as in this condition the child dies in a few minutes.

The chief indications for Cesarean section are:

1. Obstruction to delivery either on the part of the mother or child, which renders delivery through the natural passages impossible, with the best results to both mother and child.
2. When the conjugate measurement of the pelvis is below $3\frac{1}{4}$ inches.
3. When a woman has had one or two stillborn children of moderate size, following version or the application of forceps.

4. In certain cases of eclampsia, with a firm, undilated cervix.

5. When the presence of a uterine, ovarian, pelvic, cervical or vaginal tumor makes delivery impossible.

Placenta previa is sometimes given as an indication for performing Cesarean section. I think such radical measures are rarely required in this condition.

I am convinced that the interests of humanity would be better served if a large majority of the craniotomies were replaced by Cesarean section, where the child is alive. And even when the child is dead, and the conjugate is as small as $2\frac{1}{2}$ inches, Cesarean section instead of craniotomy is in the interest of the mother.

Again, there are many difficult, prolonged forceps cases, where the mother's soft parts are severely injured, and the child is either stillborn, or soon succumbs, where the mother makes a tedious recovery, if she is not actually rendered an invalid. Many of these cases, treated by Cesarean section, would practically insure the child's life, and the mother would make a much more speedy and certain recovery.

Abdominal Cesarean section is not a particularly difficult operation to one of even limited experience in abdominal surgery. Tweedy and Wrench say:

"When Cesarean section is done under favorable circumstances, it is amongst the easiest and safest of abdominal sections. When performed after a woman has exhausted herself with efforts to bring about an impossible delivery, or many attempts have been made to deliver per vaginam, it becomes a very dangerous operation." The chief mortality here, like that of intestinal obstruction, is the mortality of delay. When a woman has been in labor many hours, has had numerous vaginal examinations by a midwife or careless practitioner, especially if the membranes have been long ruptured (which always favors infection), she is probably already septic, and this is a contra-indication to Cesarean section. Other contra-indications are: Poor general condition of the patient, bad surroundings, where aseptic work could not be done, and with a child dead or dying.

There is a somewhat special technique required for abdominal Cesarean section, the chief points of which I give below.

1. Operate in the early stage of labor, and if possible before the rupture of the membranes.

2. Very few vaginal examinations should be made.

3. The patient should be in good condition, in good surroundings, and not septic.

4. Prepare the patient as for ordinary laparotomy, with special regard to the preparation of the vagina.

5. If possible, have plenty of trained assistants.

6. Having first emptied the bladder by catheter, make a high median abdominal incision, 4 to 8 inches long, two-thirds of it being above the umbilicus.

7. Do not deliver the uterus through the abdominal wound unless the uterus is septic.

8. An assistant places a hand at either side of the abdominal wall, near the wound and well backward, and regulates the pressure, so that the uterus remains in place both during the delivery of the child and while passing the deep sutures.

9. Be sure the anterior surface of the uterus lies straight under the incision, as a slanting incision in the uterus bleeds more freely.

10. Begin the incision in the uterus high up and not more than an inch in length until the cavity is reached; then quickly enlarge it to the required length; this saves loss of blood.

11. If the membranes appear on opening the uterus, sweep your hand between them and the interior of the uterus to prevent adhesions giving trouble later on.

12. If the placenta appears under the uterine incision, it is better to hurriedly cut or tear directly through it.

13. Pass in the hand and grasp one lower extremity of the child and deliver feet first, the after-coming head being managed in the ordinary way.

14. Instead of tying with strings, place two clamps on the cord and cut between them. Hand the child to a competent assistant who will take charge of establishing respiration.

15. Remove placenta with your hand; wipe out any remaining membranes and clots with gauze sponge. If necessary, dilate the os with two fingers to ensure good drainage.

16. Now place a double tenaculum on the uterus close to each angle of the wound to prevent the organ from slipping down deep into the abdominal wound.

17. Proceed quickly to stitch up the uterus by passing heavy interrupted sutures of chromic catgut. These are passed about half an inch, or a little less, apart, and embrace all the structures of the uterus down to, but not including the endometrium. These sutures should start and leave the peritoneal surface about half an inch from the edge of the wound. After these are all tied moderately tight, a continuous suture of fine catgut is used to bury the first row of sutures, and to bring the peritoneum into apposition.

18. Carefully wipe out the peritoneal cavity, count your

sponges, and close the abdominal wound in layers in the usual manner.

I venture to predict that in the near future there will be a large increase in the number of Cesarean sections performed, and a decrease in the number of craniotomies, versions and difficult forceps cases. This change will be greatly to the credit of the profession and to the benefit of humanity.

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HYPER-THYROIDISM—ITS DIAGNOSIS AND TREATMENT.*

By A. McKINNON, M.D., GUELPH, ONT.

When the chairman of the surgical section honored me with a request to prepare a paper to read before you, I decided that the subject of Exophthalmic Goitre might be suitable for consideration. I do not include simple goitre in the remarks I am about to make. I limit myself to the diagnosis and treatment of the exophthalmic form. When all three cardinal symptoms, enlargement of the thyroid, exophthalmos, and rapid, excited action of the heart, are present, the diagnosis is extremely easy. Unfortunately, however, all three symptoms are not always present.

In some cases the enlargement of the thyroid is inconspicuous, scarcely noticeable; in other cases the exophthalmos attracts but little attention. In all cases, however, the excited, rapid action of the heart is present. In advanced cases, besides these three symptoms, we have attacks involving the stomach and the alimentary canal, sometimes vomiting, sometimes diarrhea, and sometimes both, these attacks lasting perhaps less than one day, or it may be two or three days. Where one or other of the three symptoms first mentioned is absent, these crises relating to the digestive organs may fail to be recognized, and I have known cases in which the death of the patient was attributed to diarrhea, where in reality the death was from the long-continued hyper-activity of the thyroid gland.

In patients where no explanation is found for extremely rapid action of the heart, which is continuous, subject to increase on exertion, it should create a reasonable suspicion, whether or not

*Read before Ontario Medical Association, June 1st, 2nd, and 3rd, 1909.

accompanied by exophthalmos or by noticeable enlargement of the thyroid, that there may be hyper-thyroidism, as the underlying cause. In no disease is early diagnosis more important than in this condition, since many cases might reach cure without requiring prolonged treatment or operation, if the diagnosis was made in its early stages. If a diagnosis cannot be made without the presence of the three symptoms—the exophthalmos, the enlargement of the gland, and the rapid action of the heart—then there must be delay until the disease is somewhat advanced. Such delay would be extremely unwise. It would be better, therefore, to consider these cases of extreme rapidity of the heart, unaccounted for by other conditions, as due to this disease, and the patient should be subjected to the treatment required in the early stages, even though the enlargement of the thyroid gland might be slight, and the exophthalmos scarcely noticeable.

Goitre.—Enlargement of the thyroid gland is noticeable in the great majority of cases in this disease, but in many cases the enlargement is so trifling as to be very readily overlooked. As a rule, the whole gland is uniformly involved, giving rise to the well-known horseshoe-shaped projection, though one lobe may be larger than the other.

Barker, in a paper read before the American Medical Association in 1907, makes it clear that in this disease it is seldom that the enlargement is very great, except in those cases where the exophthalmic condition supervenes in a case of simple goitre or adenoma. The isthmus of the gland is usually broadened and thickened, sometimes it pulsates visibly, in other cases there is a palpable systolic expansion, and sometimes an audible bruit. In about one-fifth of the patients who suffer from this disease they have entirely failed to notice the enlargement themselves.

Tachycardia.—The pulse rate in this disease is practically always over 90, and may exceed 200 per minute. The rate between 110 and 150 is very common; the patients themselves usually notice subjective palpitation. I never knew any case of this disease where rapid action of the heart was absent.

Exophthalmos.—Barker, in the same article already referred to, states that exophthalmos is absent in about one-third of the cases, and in many of the other two-thirds it may be so slight as not to attract attention.

Muscular Tremor.—A symptom which has been noticed by Troussseau and Chareot, relates to fine vibratory rapid tremor of the muscles. It is best seen by asking the patient to hold his hand with wide outspread fingers between the observer and the light. This

symptom is commonly present, and occurs early in the course of the disease.

In advanced cases, the loss of body weight is commonly observed; this loss may be only a few pounds, but may be up to twenty or fifty pounds. The condition of the skin is changed in a marked manner, its color becoming darker, with more or less of a feeling of subcutaneous edema, very noticeable about the eyelids and the face. This condition was so marked in one of my cases that it was difficult for the friends to recognize the patient.

Most cases of this disease show anemia in varying degrees, yet the blood itself shows no constant alterations, though there is usually relative increase in the mononuclear white cells.

The mental condition is extremely varied. In some, nothing is noticed beyond slight irritability and restlessness. In others there may be delusions and hallucinations. Sometimes vertigo is troublesome. Delirium occurs in many cases and may lead the patient to wander from the bed or room, if left unattended. Sleep is usually much disturbed, and not followed by a feeling of rest, the patient often feeling worse in the morning.

In the majority of cases I have seen there was slight evening rise of temperature (100° to 101°).

Beside the exophthalmos and the marked widening of the palpebral opening, the failure of the upper lid to follow the eye in looking down is a valuable sign. It is commonly known as Graefe's sign, and is found very generally present.

Treatment.—All cases of this disease are benefited, at least temporarily, by absolute rest in bed; avoidance of stimulants is also indicated, and, of course, avoidance of all conditions tending to create nervous excitement should be insisted upon. As to medicinal treatment, it is in my mind a matter of doubt if we have one single agent of any real value for the control or cure of this disease. The number of various drugs used, with apparent benefit, in some cases is almost infinite, but the tendency now is for the abandonment of almost all of them, as being useless, and some of them positively harmful. If there be anemia, iron or arsenic may do good, and possibly small doses of bromide may help to control nervous excitement, but as to quieting the heart's action, although digitalis and strophanthus have been freely used, yet the results have not shown any lasting effect, and digitalis often disturbs the stomach.

I may refer to an attempt that has been made to treat the disease by the administration of an anti-toxic preparation, to counteract the toxemia poured into the system by the hyperactivity of the thyroid gland. Milk from thyroidectomized animals, the thyroidec-

tin, that is, the desiccated blood of thyroidectomized sheep, and very recently a serum prepared by Rogers and Beebe, by the use of the nucleo-proteid and thyroglobulin from the normal and pathological glands, all have been used in the treatment of cases recently. It is yet too soon to form a definite and final opinion as to the value of these methods of treatment. The theory on which the treatment is based appeals to me as being sound, yet the results thus far obtained are very discouraging, and any apparent benefit may be referred, probably with as good reason, to the rest, the hygiene, and the lapse of time, as to the material administered. If there be anything in this method of treatment, soon it can be demonstrated, so that use may be made of it in the management of a disease otherwise medicinally incurable.

Just how long any case should remain before resorting to surgical treatment must be decided in each case after careful consideration. It is well known that operation resorted to early is almost without danger, and cures 95% of the cases involved. It may be said that some of these would recover by simple rest and milk diet, yet those who do so recover often suffer from relapses.

Surgical Treatment.—It is my firm belief, and I think the belief of every careful observer, that operation should be resorted to much more frequently in this disease than has been the usual practice.

If there is no marked improvement in two months by the rest treatment and a milk diet, then, unless there are strong reasons to the contrary, an operation should be urged upon the patient. The operation advised does not consist in the same procedure in all cases. If the patient's condition permits, the one-half of the gland with a large part of the isthmus should be excised. In desperate cases it may be necessary to simply ligate the superior thyroid artery as a first operation, and when improvement occurs to proceed then to the removal of one-half of the gland.

In an able address delivered by the younger Kocher, of Berne, Switzerland, at the American Medical Association in 1907, he related the experience of his father and himself on 254 cases of exophthalmic goitre. In reference to the danger from operation in this disease, he said: "We have had in the last ninety-one operations on sixty-three patients not a single death, and in the whole we have lost only nine patients out of 254, that is to say 3½%, and there is no reason why this percentage could not be still further reduced." In their earlier experience the mortality was higher, and he claims that they were able to reduce the mortality by improving their technique and by the increased experience, which enabled them in the recent cases to do simpler operations, repeated if necessary in

order to cure. No cases, unless nearly moribund, were refused the benefit of operation. He advised that in all cases, before deciding upon the extent of the operation, the condition of the heart should be carefully studied, and also the condition of the blood itself; and that no serious operation should be undertaken until after a considerable period of rest, and then, if dilatation of the heart existed, or the gland showed extreme vascularity, the expansile pulsation, only a partial operation should be undertaken.

In reference to operation, Professor Barker, in the article referred to earlier in this paper, makes this statement: "In the present state of knowledge and practice, therefore, once a positive diagnosis of exophthalmic goitre is made, it is, in my opinion, the physician's duty and privilege to recommend operation early." This advice is from one who is not a surgeon, and its decisive tone should, therefore, carry great weight.

The younger Kocher concluded his excellent address with this statement: "We come now to the conclusion that operation on the thyroid gland gives the possibility of an entire cure of the disease." After discussing two theories as to the cause, he adds that a careful operation suitable to the condition of the patient will cure the case on either theory.

Operation.—Whilst I have no intention to speak in detail of the method of operation to be followed in dealing with these cases, yet I wish to refer to a few particulars that I think of very great importance:

1. Continuous effort should be made to control hemorrhage. With care it should be possible to remove the necessary part of the gland with the loss of less than one ounce of blood.

2. Traction, pressure, and rude handling ought to be carefully avoided, in order to prevent the free escape of gland secretion into the lymphatics during the operation.

3. All cases should be freely drained for the first thirty-six hours.

4. During operation the head and shoulders should be elevated a little, and a small pillow under the neck, if not objectionable on account of the breathing, gives a better exposure of the field of operation.

5. Dr. Mayo calls attention to what I believe to be an extremely important detail in after-treatment, namely, to administer normal saline freely by rectum for the first four or five days. If not retained, it should be given sub-cutaneously. Both Kocher and Mayo prefer the collar incision, and a median incision downwards if the gland extends down behind the sternum.

Anesthetic.—A number of operations have been successfully completed by local anesthesia, with cocaine infiltration, but in several, begun in this way, it was necessary to administer a general anesthetic to complete the operation.

Dr. Mayo, in a large experience, favors ether as a general anesthetic, and he advises a hypodermic injection of morphine, gr. 1-6, and atropine, gr. 1-120, given half an hour before operation. He finds that, as to shock and general condition, those who are operated upon under anesthesia by this method compare well with those under local anesthesia.

An article, by Dr. Mayo, appeared on page 273 of the *Journal of the American Medical Association* in 1907, first volume, which, from illustration and description, will be found extremely instructive to any surgeon who desires to perform the operation. He calls attention to the fact that, after liberating the upper pole of the gland, and dividing the superior thyroid artery between two ligatures, the capsule of the gland having been freely opened, and kept brushed back by a sponge, the whole of the part of the gland to be removed can be easily lifted up without any danger of including the nerve, or the parathyroid gland.

In conclusion, I wish to refer to a few cases that I have been able to trace during their lives. Many others I have seen, but they passed from under observation. Of course, in the earlier years of practice there was so little expectation of benefit from treatment that cases did not long remain under one medical man.

Case 1. In 1871, a girl of twenty-five, the gland very large, the exophthalmos marked and the tachycardia severe. In her case no special treatment was followed. She is still living, must be over sixty years of age, and survived an attack of hemiplegia a year ago.

Case 2. A married woman, whom I saw fifteen years ago as an office patient. She continued for some time well enough to be about, supervising her household duties, but her death occurred three years later from an attack of diarrhea, following over-exertion, and no doubt due to the disease.

Case 3. A girl of eighteen, tall, thin, with exophthalmos so extreme that she lost the sight in both eyes, from sloughing of the cornea. In her case the gland was large, and the pulse rate usually 130-150. Though she suffered much from diarrhea, she lived several years after the loss of her eyesight, but died from the disease.

Case 4. A married woman, seen in consultation with a colleague. There was great mental excitement, almost no sleep obtained, the pulse rate seldom below 140, and the exophthalmos

quite marked. Her death followed the use of some advertised cure which she got herself from New York.

Case 5. A girl of twenty-three, was referred to me by a colleague last November. She had been under medical treatment for many weeks without any benefit. Her general condition was good, there being no attacks of vomiting or diarrhea, but the gland was soft, gave pulsation, and tachycardia very marked. I advised early operation, which was declined. I learned afterwards that she fell into the care of an osteopath, who promised to cure her without an operation. He advised her to take abundance of exercise, and gave her treatment two or three times a week. In order to get the treatment she was permitted to drive eight or ten miles and back each time. She became comatose, and died with less than one month's treatment. This patient's life was lost on account of a foolish semi-religious prejudice against operations generally which appears to prevail in Mennonite communities.

Case 6. A married woman of fifty-eight, ill about a year, kept in bed for three months, under careful medicinal treatment. At first there was apparent benefit, but at the end of the treatment there was no real improvement. This patient had attacks of vomiting and diarrhea, lasting one or two days, and recurring every week or ten days. The pulse rate varied from 115 to 140. The gland was considerably enlarged, the exophthalmos distinct, patient slept very badly, often rising and wandering about the house, in a confused mental condition. Her voice had changed very much, being hoarse and sometimes only a whisper.

Notwithstanding the age of the patient, operation was advised as the only method that gave any hope of life. It was accepted and the operation performed in October, 1907. Ether anesthesia was used, which the patient took very well. The left half of the gland and the isthmus were excised, the stump was treated with carbolic acid and alcohol, free drainage provided for, and salines used, per rectum, as advised by Dr. Mayo, for the first five days. She made an excellent recovery, her health is now fairly re-established. The operation failed to restore her voice, though it is somewhat improved.

I may add, by way of recapitulation, in reference to the diagnosis, that in all cases where there is rapid action of the heart, persistent and unaccounted for by other conditions, and where we have even slight enlargement of the thyroid, with or without exophthalmos, that we have the right to regard the case as an incipient hyperthyroidism, and to adopt the treatment required. In reference to treatment, there is no treatment for hyperthyroidism so far

as yet known, except operation, and that should be resorted to as soon as the diagnosis is absolutely settled. In this way cure will be reached in almost every case, and months or years of chronic invalidism be prevented.

Since writing this article I have seen a report in a recent number of the *British Medical Journal* of his experience in partial thyroidectomy, by Dr. T. P. Dunhill, of Melbourne. In a summary at the close of the article he states that he had eighty-eight cases of exophthalmic goitre submitted to operation with one death, showing an excellent percentage of recoveries. He advocates that this operation should be done wholly with local anesthesia, and, no matter how large the gland may be, the operation can be safely performed. He also claims that under local anesthesia patients can be operated upon in conditions of the heart that would exclude a general anesthetic. He fails to mention what agents he uses to procure the local anesthesia.

A CASE OF LUPUS (?) OF THE NOSE.*

BY GEOFFREY BOYD, M.D., TORONTO.

Miss X., aet. 30, consulted me in December, 1906, complaining of pain and swelling over the bridge of the nose, especially on the left side, and of difficult nasal breathing on the same side, with blood-stained secretion and crusts. Four weeks' duration. Pain over both frontal sinuses was also complained of. Examination. On the bridge of nose externally redness and marked swelling, greater on the left, were evident, with pain on pressure. Internally, on the upper part of the left septum, in the middle turbinal region, was a pale, smooth, soft swelling, easily pierced with a probe and removed with a enrette with no pain and little bleeding. It blocked the upper part of the nose, preventing a view of the middle turbinal, and the septum seemed pressed to the right by it. The external wall (vestibule of the middle meatus) was also infiltrated in the same way. There were a few soft granulations over the lower turbinal and septum, easily removable with little bleeding. No ulceration was seen. Transillumination showed both frontal sinuses clear, but the left antrum was not so bright as the right. The right side of the nose, the naso-pharynx, pharynx and larynx were nor-

*Presented to the Academy of Medicine, Toronto.

mal. No glandular enlargement. Family and personal history negative. No tubercular nor specific history. The disease was regarded as specific and patient put on mixed treatment, and locally an alkaline douche, followed by a medicated oil to remove and prevent crusting. Three days later the external symptoms were better, pain and redness gone, swelling less, but little change inside the nose. This was the condition of January 12, 1907, so that a curette was used on the outer wall, and part of this, with some of the middle turbinal was removed. As the middle turbinal was seen to be infiltrated, the anterior third was removed, and therewith a small bony sequestrum. The frontal sinus was washed out, but no pus got. Microscopic examination of removed tissue: "Chronic inflammatory tissue—no evidence of syphilis or tuberculosis." In spite of local, and of various changes in internal treatment, little improvement resulted, and on January 20, 1907, the patient was seen by Dr. G. R. McDonagh, who concurred in the diagnosis of syphilis, and advised continuation of mixed medication. January 31, much better. February 19, swelling, etc., externally; a probe passed within the nasal cavity went beneath the infiltrated tissue to the nasal bone, which was bare. This was curetted later and K. I. given, starting with mins. 15 of a saturated solution, and increasing by a drop each dose. Improvement followed, and on March 30 my note is, "Nose all right," and later, on April 13, "Cured—to take K. I. in decreasing doses."

The patient was next seen in June, two months later (having taken iodide in the meantime), when there was again infiltration on the left septum, but none on the turbinals. Notwithstanding the administration of iodide in gradually increasing doses (as much as grs. 90, t.i.d.) with mercury by inunction and internally, the symptoms gradually increased, external swelling recurred, varying in extent, at times greater, at times less, but causing severe pain and much disfigurement. Finally, in January, 1908, infiltration was seen on the right septum similar to that on the left side. In April ulceration was noted and a perforation in the cartilaginous septum. About this time the patient blew from the left nose a small bony sequestrum. The external manifestations were greater than at any previous time. Moreover, the infiltration on the right septum assumed a nodular mammillated appearance, and distinct pale nodules were seen on both lower turbinals anteriorly that were very suggestive of lupus. Another consultation was held with Dr. McDonagh in May, 1908, who now regarded this disease as lupus, and advised operation. This accordingly was done under cocaine anesthesia at the end of May. All of the diseased septum, involving

most of the cartilaginous and some of the bony part, was removed, the turbinals firmly curetted, and pure lactic acid rubbed in. On several occasions later small nodules and diseased parts on the wound margins were removed, lactic acid being applied, and when seen on September 7 the nose was clear. It was remarkable how quickly the external swelling, etc., subsided after the first removal. No recurrence has taken place, and when last seen, on October 28, the nose appeared healthy, no nodules nor infiltration being seen. No deformity is present, although the septum has been removed right up to the lateral cartilages and nasal bones. Specific treatment was stopped when the disease was considered to be lupus, Fowler's solution being substituted. Pathological report of the removed portion of septum, by Dr. Goldie: "Sections show marked small-celled infiltration, with many free vessels whose walls are thick and soft. No sign of T. B. May be simple or specific." (Signed) W. G.

REMARKS.

This case has been a very puzzling one. There seemed to be no doubt about the original diagnosis, viz., of syphilitic gumma. The character, appearance, situation and fairly rapid growth of the lesion, with the external signs, apparently admitted of no doubt on this score. And the subsidence under specific treatment, although taking much longer than usual (4 months) seemed to support the diagnosis. But the recurrence later, the absence of the characteristic odor where bony necrosis is present, and the failure of specific medication, faithfully taken and often in heroic doses, scarcely to influence the symptoms, caused much doubt to arise as to its real nature. The first microscopical examination again was puzzling. Skilled pathologists reported that there was nothing suggestive of either syphilis or tuberculosis in the sections examined. Later the nodular mammilated appearance of the infiltration, with distinct nodules on the turbinals, seemed to point to lupus as the probable cause; and I regret that inoculation experiments were not undertaken to verify this. However, if the original affection was syphilis, and yielded, though tardily, to syphilitic treatment, why was not the recurrence followed by the same result, if this too was syphilitic?

In the March, 1908, number of the *Annals of Otolaryngology and Rhinology*, Henri Cabauche has an extremely interesting paper on "Tuberculosis of the Nasal Mucosa." I will refer the Fellows to this paper for his views *in extenso*, and will content myself with saying briefly that he considers the great majority of cases

of tuberculosis of the pituitary membrane to be local and primary, and, therefore, lupus, the remainder being the rarely seen cases of miliary granular tuberculosis, which are secondary to pulmonary disease. This local pituitary disease always precedes the skin manifestations, but may occur without the latter. He describes four principal forms that the disease assumes, viz., nodular lupus, vegetating lupus, lupus tumor and ulcerating lupus.

This case corresponded very closely to his description of lupus tumor, but I am sure that it would not be considered as such by him, on account of the swelling, etc., on the bridge of the nose (osteo-periostitis) and the bone necrosis. Lupus generally respects the bony septum and the nasal bones. "I have never seen lupus accompanied by a bone lesion." (Caboche.) He discusses and dismisses as not proven the existence of an osteo-cartilaginous form of nasal tuberculosis, which, indeed, this case may have been. It is possible that there may have been both a syphilitic and a lupoid infection, the former disease predominating in the first, and the latter in the final stage of the affection.

I must confess that I am inclined to regard this case as lupus, in spite of the microscopical examination, and I will be glad if in the discussion any light can be thrown upon its nature.

Reviews

Hand Book on Diseases of the Rectum. By LOUIS J. HIRSCHMAN, M.D., of Detroit. St. Louis, Mo.: C. V. Mosby Co.

Dr. Hirschman is to be congratulated on the production of a very excellent work on the treatment of diseases of the rectum.

The chapter descriptive of his careful and complete methods of examination, is excellent and well worth careful study by the general practitioner. Not only does he describe his technique, but there are a number of excellent plates which illustrate his methods very well.

Most of his work is done under local anesthesia, and the great range of work he is able to accomplish under local anesthesia is well worth the consideration of the profession.

The technique of procuring local anesthesia is described in a very lucid manner, and the reader should have no difficulty in following his method.

Chapter XIII on Dysentery, by John L. Jelks, M.D., of Memphis, Tennessee, is very excellent. The pathology, symptoms and treatment are carefully considered. The method of irrigation and of applying local treatment by means of the proctoscope are thoroughly well described.

Irrigation of the colon by means of a "two way" colon tube inserted with patient in "the knee shoulder position" is carefully illustrated and well described.

The last chapter is on the Clinical Examination of the Feces, by E. W. Wagner, M.D., Detroit. It is chiefly concerned with laboratory methods and deals with methods of detecting worms, parasites, foreign bodies, etc. Altogether I think the book a very good one and a safe one to follow in practice.

W. J.

Treatment of the Diseases of Children. By CHARLES GELMIRE KEILEY, M.D. Philadelphia: W. B. Saunders Company. Second Edition. 628 Pages. Illustrated. Canadian Agents: J. A. Carveth & Co., Toronto.

Doctor Keiley's book is one written more especially for the physician engaged in general practice. Most of the modern methods of treatment and management are given in very full detail. The methods suggested are those of observation, both in private practice and in hospital work. There is an interesting chapter on gymnastic therapeutics, quite a new departure for general text books. The work is well written and nicely illustrated.

A. C. H.

Dominion Medical Monthly

And Ontario Medical Journal

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Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 203 Beverley St., Toronto, Canada

VOL. XXXIII.

TORONTO, AUGUST, 1900.

No. 2.

COMMENT FROM MONTH TO MONTH.

Canadian Medical Association—We invite our readers to consider seriously, and especially those who already are members of the national medical body, the call to attend the Annual Meeting this year in Winnipeg, August 23rd to 25th. The three more important questions which will be presented at this meeting are Dominion Registration, the report of the Milk Commission and the establishment of a journal to be the official organ of the Association. The latest Medical Association to seek incorporation is the Manitoba Medical Association, and it is likely that the provinces of Saskatchewan and Alberta will pass similar resolutions prior to that date. British Columbia, as last year, will send delegates to the Executive Council, and Ontario will be represented by the same contingent as were elected one year ago. There is a keen interest being taken all over Canada in this meeting. It will be the second meeting taking place in Winnipeg, the last being held in 1901. Then there is the Annual Meeting of the Canadian Medical Protective Association, which will be held during the progress of the meeting of the national body. This now has a permanent member-

ship over five hundred, the very best success has attended its efforts and its finances are remarkably sound. All honor is due to Dr. Powell, of Ottawa, who ever since its inception in 1901 at Winnipeg has administered its affairs and has brought it to its present splendid position. Delegates are being sent from the various medical councils of the Dominion to confer with one another on the matter of Dominion Registration and more than ever attention is being devoted to this subject out of which let us hope may soon result that which nearly every individual practitioner desires to see. The Milk Commission is going to have a good report of the work which it has been doing, and before the end of the meeting local sub-committees will have been organized in nearly every prominent centre in Canada. The Executive Committee and the Finance Committee will take up seriously the question of a journal and every one who favors this, Dominion Registration, affiliation of the provincial societies, the pure milk campaign and other vital questions, should make an earnest effort to be present and help along the good work of consolidating the profession all over the Dominion. The preliminary programme has been issued and from it one can judge that the standard of the scientific material offered is as good as at any previous meeting. From the Maritime Provinces a good contingent is going; Quebec and Montreal are also going to be well represented; Toronto and Ontario are well represented on the programme and almost every section of the province will be represented. The West will be sure to be there in large numbers. The Committee of Arrangements in Winnipeg is sparing no pains to make the 42nd the most successful annual meeting yet held. Can you afford to miss it?

News Items

DR. J. F. W. ROSS, Toronto, is in the West.

DR. HELEN MACMURCHY, Toronto, is taking a trip to the Pacific Coast.

DR. J. H. ELLIOTT, Toronto, is spending two months at Port Carling.

DR. R. W. POWELL, Ottawa, has returned from two months' trip abroad.

DRS. HARRY MEEK AND F. R. DRAKE, London, Ont., have sailed for Europe.

DR. GEOFFREY BOYD has returned to Toronto after spending three months in Europe.

DR. E. P. HARDY, Toronto, has been elected President of the Ontario Medical Council.

DR. HALPENNY, Winnipeg, was in Toronto July 28th en route to Europe and the International Medical Congress.

THE Western Hospital, Toronto, are commencing a new wing at a cost of \$100,000, which when completed will accommodate 75 patients.

DR. WILBERT MCINTYRE, M.P., died on July 21st following an operation for kidney trouble. He was member of Parliament for Strathcona, Alta.

DR. J. T. FOTHERINGHAM, Toronto, has gone to Seattle, and will return via Winnipeg to attend the Canadian Medical Association, August 23rd to 25th.

A START has been made with the new Toronto General Hospital. The old buildings on the site are being rapidly demolished and excavations will be proceeded with without delay.

HEALTH Inspectors in Montreal have been busy vaccinating factory employees in that city. In October the hotels will be attended to, as then the summer tourist season will be over.

A Chicago firm threatens proceedings against the Ontario Board of Health and a score of municipalities in Ontario, questioning their right to use the septic tank system of sewage disposal.

DR. J. N. ROY, Montreal, has received from the French Government the order of the "Dragon de l'Annam." This decoration, which has not previously been conferred on any Canadian, is largely bestowed for military service.

THE Eleventh Annual Conference of the American Hospital Association will be held at the New Willard Hotel, Washington, D.C., September 21st, 22nd, 23rd and 24th, 1909. A good programme has been prepared.

DR. T. G. ROBBICK has sailed for Europe and will not be able to attend the Canadian Medical Association meeting in Winnipeg, August 23rd to 25th, where he had intended introducing again the subject of Dominion Registration.

DRS. F. J. SHEPHERD AND H. S. BIRKETT, Montreal, have gone to attend the International Medical Congress at Budapest. It is rumored that Dr. Birkett has been or will soon be appointed laryngologist to His Majesty King Edward VII.

THE Ontario Medical Council met in Toronto during the week ending the 10th of July. Two delegates were appointed to confer with similar delegates from the western provinces at the meeting of the Canadian Medical Association in Winnipeg August 23rd to 25th.

THE Maritime Medical Association met in Charlottetown on the 14th and 15th of July. Questions which came before the meeting were affiliation with the Canadian Medical Association, reciprocity with Great Britain and Dominion Registration. Dr. W. A. Ferguson, Moncton, N.B., was elected President; Secretary, Dr. G. G. Melvin, St. John. Dr. Montizambert, Director-General of Public Health, Ottawa, was present and delivered an address on Tuberculosis. Lieut.-Colonel Carleton Jones, Ottawa, Director-General Army Medical Service, was also present and spoke on the establishment of a laboratory in connection with the service.

THE Annual Meeting of the New Brunswick Medical Association was held in St. John on the 20th and 21st of July. As the Maritime Medical Association will hold its next meeting in St. John in 1910 it was decided that the New Brunswick Medical Society would meet at the same place, and that an invitation be extended to the Canadian Medical Association to meet there as well in 1910. Dr. H. A. Murray, of Fredericton Junction, was elected President, and Dr. J. S. Bentley, St. John, Corresponding Secretary.

Mr. H. K. Lewis, of London, Eng., has purchased the remainder of the stock of the New Sydenham Society's publications, comprising the collection of volumes on medicine and surgery, the *Pathological Atlas*, the *Lexicon of Medical Terms*, and the *Atlas of Clinical Medicine, Surgery and Pathology*, issued by the Society during the years 1859-1907. Many of the works were of a pioneer character when issued by the Society, and have since acquired a classic and historic importance. The number of copies of each book has been of necessity limited on account of the heavy expense of warehousing a larger stock, and of many of the volumes only a small number remained over.

Publishers' Department

THE Canadian Medical Exchange, 75 Yonge Street, Toronto, conducted by Dr. W. E. Hamill, Medical Broker, desires us to inform physicians who may wish to sell their practices and homes, that this is an excellent time of the year to list their offers with him. At the present time he has over twenty bona fide registered buyers, who are able to pay for anything that suits them. All prospective buyers are bound legally and morally to secrecy, and to not offer opposition if they do not buy. Full particulars will be cheerfully furnished any prospective vendor, if he will write to the Doctor.

THE MODERN TREATMENT OF HAY FEVER.—Whatever be the accepted views as to the pathology and etiology of hay fever, there is little difference of opinion concerning its importance and the severity of its symptoms. An agent that is capable of controlling the catarrhal inflammation, allaying the violent paroxysms of sneezing and the abundant lacerimation, cutting short the asthmatic attack when it becomes a part of the clinical ensemble, and, finally, sustaining the heart and thus preventing the great depression that usually accompanies or follows the attack—in short, an agent that is capable of meeting the principal indications—must prove invaluable in the treatment of this by no means tractable disease. In the opinion of many physicians, the most serviceable agent is Adrenalin. While not a specific in the strict meaning of the word, Adrenalin meets the condition very effectually and secures for the patient a positive degree of comfort. It controls catarrhal inflammations as perhaps no other astringent can. It allays violent paroxysms of sneezing and profuse lacerimation by blanching the turbinal tissues and soothing the irritation of the nasal mucosa which gives rise to those symptoms. It reduces the severity of the asthmatic seizure, in many instances affording complete and lasting relief. There are four forms in which Adrenalin is very successfully used in the treatment of hay fever: Solution Adrenalin Chloride, Adrenalin Inhalant, Adrenalin Ointment, and Adrenalin and Chlorotone Ointment. The solution, first mentioned, should be diluted with four to ten times its volume of physiological salt solution and sprayed into the nares and pharynx. The inhalant is used in the same manner, except that it requires no dilution. The ointments are supplied in collapsible tubes with elongated nozzles, which render administration very simple and easy. It is perhaps

pertinent to mention in this connection that Messrs. Parke, Davis & Co. have issued a very useful booklet on the subject of hay fever, containing practical chapters on the disease, indications for treatment, preventive measures, etc. Physicians will do well to write for this pamphlet, addressing the Company at Walkerville, Ontario, or at Branch, No. 378 St. Paul St., Montreal, Que.

GOOD RESULTS IN STUBBORN CASES.—Every physician knows full well the advantages to be derived from the use of antikamnia in very many diseases, but a number of them are still lacking a knowledge of the fact that antikamnia in combination with various remedies has a peculiarly happy effect. Particularly is this the case when combined with salol. Salol is a most valuable remedy in many affections and its usefulness seems to be enhanced by combining it with antikamnia. The rheumatoid conditions so often seen in various manifestations are wonderfully relieved by the use of this combination, and the painful stiffness of the joints which remains after a rheumatic attack are also relieved by "Antikamnia and Salol Tablets" containing 2 1-2 grs., each of antikamnia and of salol and the dose of which is one or two every two or three hours. Salol neutralizes the uric acid and clears up the urine. The pain and burning of cystitis is relieved to a marked degree by the administration of these tablets. This remedy is also reliable in the treatment of diarrhea, entero-colitis, dysentery, etc. In dysentery where there are bloody, slimy discharges, with tormina and tenesmus, a good dose of sulphate of magnesia followed by two antikamnia and salol tablets every three hours will give results that are gratifying.

THE EARLIEST SYMPTOM OF ENLARGED PROSTATE.—Increased urinary frequency, chiefly nocturnal in character, is the earliest and most frequently encountered symptom of enlarged prostate. Many cases of hypertrophied prostate might never develop beyond this point if sanmetto was administered as a prophylactic, and the discomfort of rising two or three times at night to urinate, to say nothing of entering upon a catheter life, might be avoided.

It is especially in the chronic prostatic hyperplasia which we find in old men, always associated with chronic vesical catarrh, that sanmetto gives the most brilliant results. Numbers of cases can be recited in which the use of sanmetto alone has not only relieved the vesical irritability, but has seemingly reduced the hypertrophy of the prostate and enabled the patient to dispense with catheterization and micturate unassisted for the first time in years.

THE ACTION OF SANMETTO IN GONORRHEA.—The philosophy of the action of sanmetto in gonorrhea may be explained in this way: Sanmetto has no direct germicidal action in the treatment of membranous conditions due to the invasion of the gonococcus. It should be borne in mind that sanmetto does not directly destroy gonococci. Whatever may be its direct action upon these germs, it is certain that it does not have any such directly germicidal influence. What it probably does is to set up in the mucous membrane a reaction to the inflammation or a nutritive toning up of the parts, which brings to the parts a sufficient reinforcement of leucocytes to overwhelm the germs—the gonococci. This view of the action of sanmetto explains the apparent aggravation which sometimes is set up in the treatment of chronic inflammation of the bladder and urethra, and a consequent sloughing off of shreds and purulent matter, causing the patient to think the sanmetto has made his case worse, but which really is but the smoke of the battle in which sanmetto is to be the victor and the gonococci the vanquished.

SPECIALS FOR HORSES.—Show the Widespread Reputation of the Horse Show at the Canadian National. The special prizes offered in the breeding classes at the Canadian National Exhibition, Toronto, this year indicate the widespread reputation of the horse exhibit. The Ontario Jockey Club donate \$100.00 to the thoroughbreds. Medals are offered in the Hackneys by the English Hackney Horse Society and the American Hackney Horse Society. In the Clydesdales, Mr. Geo. A. Ferguson, of Surradale, Scotland, gives an additional \$25.00 to the champion stallion, while the Clydesdales Association give specials of \$50.00 to the best stallion, any age, and best mare, any age. In Shires, the Shire Horse Society of England give a \$50.00 gold medal for the best stallion or entire colt, and another of equal value for the best mare or filly. These are just a few of the many evidences of the world-wide reputation of the Horse Show.

THE "PERSONALLY CONDUCTED" SCHOOL GIRL.—In a recent issue of one of our prominent medical journals appeared an article from the pen of a well known pediatricist, entitled "The Personally Conducted Baby." While the importance of a sedulous and careful attention to the needs of the growing infant cannot be overestimated, it is equally important that the physical requirements of the adolescent school girl should be carefully looked after during the impressionable and formative period of life incident to the

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initiation of the menstrual epoch. "The Personally Conducted School Girl" is more likely to successfully weather the stress and strain of the modern educational system than one who is not so carefully guarded. Regularity and system are essential requisites of success. Hurried and irregular meals, the eating of an undue amount of pickles and condiments, too frequent indulgence in candies and sweets, should not be allowed. Habitual constipation should not be allowed to continue, and sufficient exercise in the open air should be insisted upon. The bedroom window should always be freely opened at night, and late hours and exciting entertainments should be avoided. In spite of all hygienic precautions, however, the school girl is likely to become more or less chlor-anemic. In such cases the irritant forms of iron are worse than useless, because of their disturbing effect upon digestion and their constipating action. Pepto-Mangan (Gude) is free from these disadvantages and can be given as long as necessary without producing intolerance or gastro-intestinal derangement. Periodical blood examinations will evidence the prompt and progressive increase of red cells and hemoglobin, and the gradual return of color will show the general improvement of the patient.

THE POISON LABEL IN RUSSIA.—Since the Russian Government enacted the law requiring the poison label to be attached to all containers of vodka (a strong alcoholic beverage), numerous cases of accidental poisoning have been reported from various parts of the Empire. There is a large population of illiterates in Russia, and with them the poison label appearing on vodka bottles has come to stand for vodka. As a result many bottles of really poisonous mixtures are being drunk by these people under the impression that any bottle bearing the poison label contains vodka. This emphasizes the danger of making the poison label too common, for, while we have few illiterate adults, we have many children, and to them the poison label now means a sign of real danger. The attempt to impose the poison label upon drugs, medicines and household remedies which have been freely and harmlessly taken for years, cannot be too severely condemned. When the poison label appears too often, and on nearly everything, children, as well as adults, will become careless of poison labels, because the word "poison" and the skull and cross-bones will lose their terror, and bottles and boxes of really poisonous drugs will be carelessly left with bottles of harmless remedies, because all are labeled alike. The dangers to the public, and to children particularly, of this confusion cannot be over-estimated.—*The New England Druggist*.

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXIII.

TORONTO, SEPTEMBER, 1939.

No. 3.

Original Articles

GASTROGENIC DIARRHEA.

BY GRAHAM CHAMBERS, B.A., M.B.

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Toronto General Hospital.

By this term I mean a diarrhea due to a disorder of the stomach.

The stomach and the intestines are organs which are very closely related; embryologically by the stomach and the first two portions of the duodenum being derived from the same fetal structure, namely the fore gut; anatomically by both viscera being contiguous parts of the alimentary canal; and physiologically by both having digestive functions. Nowadays both viscera are believed to have an essential function in digestion. However, until recently this was not the accepted view. The stomach was looked upon more as a receptacle for food than a digestive organ. The fact that the juices in the intestinal canal contain ferments for the digestion of the principal kinds of food-stuffs, namely, proteins, carbohydrates and fats, lent support to this view. The idea also gained credence from an investigation of Von Noorden in 1890, which appeared to show that a decrease or an increase in the secretion of gastric juice neither interfered with the digestion of foodstuffs nor the metabolism of the human economy. Recently, however, owing, no doubt, to greater care in the examination of feces and the correlation of the findings with the conditions of the functions of the stomach, the belief in the independence of the intestine as a digestive organ for all kinds of foods has been shown to be erroneous. Oppler, Einhorn, Schutz, Strasburger, Schmidt, and many others who have worked in this field believe in the essen-

tiality of gastric digestion and have shown that there are cases of intestinal disorder of purely gastric origin. These are principally diarrhea, constipation and enteritis.

The object of this paper is to discuss in part the role of gastric affections in the pathogenesis of diseases of the intestine, and to report observations on some cases of chronic diarrhea due to disorders of the stomach.

For convenience the subject may be considered under the following headings:

- (a) Diarrhea due to achylia and hypochylia.
- (b) Diarrhea due to apepsia.
- (c) Diarrhea due to hypermotility of the stomach.
- (d) Diarrhea due to motor insufficiency of the stomach.
- (e) Diarrhea due to pyloric insufficiency.

In this paper I shall limit my remarks to the first division--Diarrhea due to achylia and hypochylia.

The association of achylia with diarrhea, and hyperchlorhydria with constipation are common clinical observations. In atrophic gastritis and nervous achylia, in both of which the secretion of the stomach is diminished or absent, diarrhea is a common symptom, especially in patients who are wont to commit dietetic errors. Again, in pernicious anemia the gastric secretion is invariably decreased, and with the exception of the changes in the blood, diarrhea is one of the most frequent manifestations of the malady. On the other hand, in affections characterized by excessive secretion of hydrochloric acid by the gastric mucosa, constipation is generally present. Thus in gastric ulcer there is usually an over-secretion of hydrochloric acid, and constipation is the rule.

In support of these statements in regard to the relations of constipation and diarrhea to secretory disturbances of the stomach, further evidence is obtained in the treatment of gastric intestinal affections. For instance, in the therapy of hyperchlorhydria complicated by constipation, the latter is frequently relieved by the treatment of the excessive acidity of the stomach. Again, I have frequently observed that in persons with irritable nervous systems and with a tendency to hyperchlorhydria the eating of raw fruits, pickles, and other substances which usually have a laxative action, has produced the opposite effect, *i.e.*, constipation. Again, in the therapy of achylia associated with diarrhea, whether the achylia be due to gastritis, nervous disturbance or to part of the symptom complex known as pernicious anemia, still more striking evidence is obtained, for the administration of hydrochloric acid is always helpful and frequently gives relief from the intestinal disturbance. If the administration of hydrochloric acid, or in fact any other

mineral acid, check a diarrhea, then I think it is fair to assume that the diarrhea was due to insufficiency of gastric juice. In the diarrhea of pernicious anemia hydrochloric acid is, from my experience, a most valuable remedy. In most cases the beneficial effect is particularly prompt. In some cases the acid must be exhibited in large doses in order to produce the desired effect. About two years ago I called attention to this use of hydrochloric acid, and since that date I have many proofs of its efficiency.

The exhibition of a mineral acid in the treatment of diarrhea is by no means new therapy. In the literature of medicine, a mineral acid—sulphuric, nitric or hydrochloric—is frequently recommended as a remedy for diarrhea. Hope's mixture, which consists of nitric acid, laudanum and camphor water, was at one time a very prominent preparation. Sulphuric acid was also frequently prescribed for the same purpose, its beneficial action being held, at least by some physicians, due to its astringency. This belief was undoubtedly not based on pharmacological principles.

Let us for a moment consider the pathogenesis of this type of diarrhea. To do so we must consider some of the functions of the stomach and intestine.

The hydrochloric acid of the gastric juice has an antiseptic action, which prevents the growth of germs during the passage of the food through the stomach. The juices in the small intestine are also antiseptic, which action is probably not so active as that of the gastric juice. Their actions in this regard should be looked upon as secondary and subsidiary to that of the gastric juice. When the stomach and small intestine are functioning normally bacterial growth is checked in both these viscera, and putrefaction at least does not occur. If, however, the gastric juice is deficient in acid the intestinal juices may not be able to cope with the germ growth. Putrefaction and fermentation may occur and lead to diarrhea. This theory of the origin of diarrhea is supported by an investigation of Strasburger, which showed that in cases of hyperacidity associated with constipation there was a decreased number of bacteria in the feces.

Again, the gastric juice has an exclusive digestive function of certain foodstuffs. For example, connective tissue, raw or poorly cooked, is dissolved by gastric juice, but is not acted upon by the proteolytic ferments of the intestinal juices. This is a very important function of peptic digestion, which makes it possible for the gastric juice to disintegrate masses of meat. In achylia, and possibly also in marked hypochylia, connective tissue may pass through the stomach and intestine unacted upon by the digestive ferments. Masses of meat, which should be more or less disintegrated in the

stomach, will pass into the intestine, where, owing to the protection of the unchanged connective tissue, the fat and muscle cells will remain undigested and form a nidus for germs which might lead to diarrhea.

That such conditions exist with regard to the digestion of connective tissue one can readily obtain proof by giving special meat diets to patients with achylia. If one gives to such a patient three or four ounces of beef, chopped into fine pieces, and only slightly cooked, connective tissue can invariably be found by microscopic examination. In my work I have frequently made use of meat very rich in poorly cooked connective tissue as a test. Three or four grains of carmine given at the same time is of value, as this dye passes through the intestinal canal unchanged in color and therefore indicates roughly the portion of the feces most likely to contain the connective tissue. I may state that in carrying out this connective tissue test the diarrhea should be checked by the administration of an opiate, as the excessive peristalsis alone may carry the foodstuffs along the alimentary canal so rapidly that perfect digestion is impossible.

To summarize, one may say that a diarrhea is probably due to achylia when the following signs are present:

- (1) The presence of achylia.
- (2) The checking of the diarrhea by the administration of a mineral acid.
- (3) Diarrhea being absent, the presence of connective tissue in the feces after a meal containing meat almost raw.

The time of the day at which the diarrhea occurs may be of value in diagnosis. In some of my patients with diarrhea caused by achylia the complaint occurred only in the morning; in others, after the midday meal. However, I should hesitate to give much diagnostic importance to these observations, as I have seen cases of hyperchlorhydria complicated by morning diarrhea.

THE TREATMENT OF DIARRHEA CAUSED BY ACHYLIA AND HYPOCHYLIA.

The treatment of this type of diarrhea should always be conducted in a rational manner. Medicinal, dietetic and hygienic measures are required.

Dilute hydrochloric acid is a valuable remedy. I usually prescribe a teaspoonful of the medicinal acid in a glassful of water, to be taken in divided doses during the hour after each meal. This alone is generally efficient in checking the diarrhea. The mode of action of the acid in checking a diarrhea is difficult to explain.

One should hardly expect from the mass of the acid administered that it acted by making up the defect of the secretion of gastric juice. The probable action appears to me to be due to a stimulating effect on secretion.

As in most cases of achylia there is diminished secretion of pepsin, it is always well to give this digestant. From a theoretical standpoint bitters are indicated, and in practice I invariably make use of them, but it is very difficult to estimate their value in this disorder.

In severe cases of diarrhea due to achylia it is well to administer castor oil every three or four days for a few weeks, with the object of removing any excessively irritating matter. The dietetic treatment is of first-rate importance. In all cases the foods should be freely divided, and as a rule thoroughly cooked. The patient should be instructed to practise thorough mastication. The food should be as free as possible from germs. The kind of dietary should vary with the cause of the achylia. When the condition is a neurosis, almost any kind of food-stuff in small quantity may be eaten. Foods which are stimulating to the gastric secretion are particularly indicated. Among these I may mention meats, salty foods, beef teas, acid fruit juices, and sugar. As mentioned above, these should only be taken in small quantities at a time. The thorough cooking of meat is very important, as thereby the connective tissue is changed to gelatine, which is readily digested by the intestinal juices.

When the achylia is caused by atrophy or inflammation of the gastric mucosa, greater care should be exercised in the selection of the dietary. For a time the foods should be liquid or semi-solid, and selected so that there is very little stimulation of the mucous membrane of the stomach. Later, stimulating food-stuffs may be added.

In the treatment of the diarrhea of pernicious anemia the same dietetic principles are applicable. In cases in which vomiting is a symptom it is well to give liquids and semi-solids and select foods which are not actively stimulating until the gastric irritability disappears. Buttermilk is a favorite with me. As soon as the excessive irritability of the stomach disappears a more stimulating diet may be substituted.

Fresh air and rest are hygienic measures which should not be neglected in the treatment of these disorders. Both tend to improve the tone of the neuro-muscular system of the intestine, which controls intestinal movements. The wearing of a flannel abdominal bandage is another hygienic measure which is frequently of great value in the prevention of the diarrhea.

In conclusion I may mention that psycho-therapy should not be neglected in these disorders of the alimentary tract. The mental state is known to have a marked influence on the gastric secretion, and psychic disturbances are probably etiological factors of nervous achylia. One should therefore treat the mental state of the patient. This as a rule can only be done successfully after a thorough examination of the patient. The examination of the gastric contents, feces, blood, etc., are in a way psychotherapeutic measures, because they tend to develop confidence in the patient. The physician becomes in a position in which he can obtain the best out of his medicinal, dietetic, and hygienic measures. He may be able to lessen worry by removing fear of some disease. Three of my patients feared intestinal tuberculosis as a cause of the diarrhea, which fear in itself was sufficient to aggravate the disorders of the stomach and intestines.

STERILITY OF WOMEN.

BY F. A. CLELAND, M.B., NEW YORK.

The problem of the sterility of women is one of far-reaching and universal importance. The economic and sociologic aspects of the question are of the utmost interest. When we consider that in all countries from 7% to 15% of all marriages are non-productive, we recognize the vast importance to the state, and this does not even take into account the cases of relative sterility, where the number of children are only one or two per family. But, aside from these, the inability of a woman to bring forth offspring is often the cause of unhappiness and disagreement between husband and wife. In some countries it is even recognized as a legitimate reason for divorce. Therefore, when a woman consults us regarding her sterility, it is our duty, if possible, to discover the cause and to rectify it. Moreover, it ought to be more generally known that this condition is not always hopeless, and that it may sometimes be overcome by rational medical or surgical treatment. The mother-love is strong in womankind, and we never know fully how much disappointment and despair are hidden in the heart of the childless wife.

Before speaking of treatment, I will rapidly review the causes of sterility in women. These are variously classified by different writers, but to my mind the most rational and easily understood

classification is that of Henry Gervis. I will largely follow his classification as a working basis in my arrangement. He classifies all cases of sterility into absolute sterility and contingent sterility, and each of these classes he subdivides into congenital and acquired. 1st. The cases of absolute sterility, in which there is a congenital organic defect of an irremediable character. For example: (1) the rare occurrence of the complete absence of the ovaries; (2) absence of both tubes; (3) complete absence of uterus, or its presence as a rudimentary organ only, or (4) congenital atresia of the vagina.

These cases are extremely rare. It includes also those cases of acquired origin or somewhat similar organic defects due to pathological causes which have occurred after birth or ensued upon surgical operation. For example: (1) destruction of both ovaries by inflammatory, neoplastic, or atrophic disease—double ovariectomy for cystoma, etc.; (2) complete obstruction of the tubes by inflammatory exudate, etc.; (3) removal of the uterus for fibroids or malignant disease, etc.; (4) complete atresia of the vagina by cicatricial obliteration. In the class of absolute sterility there is no treatment possible to correct the condition, owing to the nature of its causation.

The cases of contingent sterility may also be classified somewhat arbitrarily into (a) congenital, and (b) acquired.

(A) Into the congenital class we may put the (1) immaturity of the ovaries, (2) temporary congenital interference with the patency of the tubes (this is probably very uncommon), cysts near the fimbriated extremity of the tubes, which subsequently rupture and disappear; (3) congenital malformation of the uterus capable of treatment. This is the class of case which offers most hope for surgical interference. (4) Malformation of the vagina and its vulvar entrance, as, for instance, imperforate hymen, transverse septum of vagina.

(B) Into the acquired class we may put (1) certain abnormal conditions of the ovaries, as, for example, sub-acute ovaritis, slight pelvic peritonitis, parametric exudate, temporary malposition, depressed innervation; (2) slighter forms of double salpingitis, or mechanical interference from pressure of a pelvic tumor; (3) certain diseases of the uterus, as, for example, endocervicitis, endometritis and metritis—versions and flexions of the uterus and prolapse—elongation of the cervix, fibroids and polypi, lacerations of the cervix; (4) certain diseases of the vagina—vaginitis—ruptured perineum, cysts and fibroids (rare), certain diseases of the vulva, vulvitis, eczema and pruritis, cyst of Bartholin's gland,

caruncle of urethra—hypertrophic enlargement of labia—vaginismus.

From this rather extensive classification, it is readily seen that there is hardly any pathological condition affecting a woman's generative organs which may not have to do with sterility. Upon first thought, it would seem that there would naturally be many cases where operative procedure would be not only justifiable, but indicated. But this is not so, for in reality the field for surgical interference is a limited one. In the first place, all of those cases classed as absolute sterility are beyond the surgeon's help. And of the contingent class, many of the cases are either of too grave a nature, or would require too extensive an operation to justify operative measures for sterility *per se*. It is, however, gratifying to know that sterility is sometimes cured by the correction of these more extensive pathological conditions by means of operation or treatment undertaken on account of the woman's ill-health alone. For this reason, conservative surgery, when possible, is always advisable when operating for diseased ovaries or tubes, and in operating for fibroids of the uterus in a young woman a myomectomy should always be preferred to a hysterectomy if this can be done.

Whether a surgeon is justified in entering the peritoneal cavity for sterility alone is an open question. In the absence of other symptoms it should never be undertaken, unless under exceptional circumstances, and then only after clearly explaining the situation to the husband and wife, so that they may decide whether the risk is worth taking in an operation, the success of which is always problematical.

Moreover, it should always be borne in mind that the husband may be the cause of the unfruitful marriage. This subject has not been as fully investigated as it deserves, but the opinion of those who have reported their findings is that about 25% of the sterile marriages are due to the male. The majority of cases of sterility in the male are due to obliteration of both vasa deferentia, following gonorrhea. The husband is usually ignorant of his impotence owing to the fact that obliteration of the vasa deferentia causes no lack of power in his sexual relations.

Therefore, before any treatment whatsoever, no matter how simple, is undertaken for the woman, the husband should be investigated. He should not be questioned in the presence of his wife, for most men are loath to admit past follies; nor will they usually admit their inability to procreate, even if they are aware of it. A sample of sperm ought to be procured and examined

microscopically to determine the presence or absence of living spermatozoa. If no living spermatozoa are found in the first sample, a second or third ought to be obtained after the lapse of some weeks, and preferably after a week's continence. If no living spermatozoa are found, we even then ought to give a somewhat guarded prognosis, for the condition of azoospermia is sometimes not permanent. But if living spermatozoa are demonstrated, it is then reasonable to suppose that the woman is at fault, and our next step is to try and find out where her trouble lies.

The essence of success depends upon a careful and painstaking examination. The causes are of such an intricate and complex nature that a broad and comprehensive view of the whole situation is necessary. We must also remember that more than one cause may be a factor in sterility in the same case, and that the correction of one cause without the correction of the others would not result in a cure. The prognosis at best is uncertain. Some condition may be present which it is quite beyond our powers to detect. But, on the other hand many women are sterile on account of some simple condition which is easily corrected. That this is so, accumulated clinical evidence of cases having been treated successfully proves decisively. And if, after treatment, a living child be born, this ought to be as great a source of satisfaction to the surgeon as it is gratifying to the parents.

The cases from which we may expect the best results all come under the class of contingent sterility mentioned above. Abnormal conditions of the vulva operate mainly by way of dyspareunia. Such conditions as vulvitis, eczema and pruritis, cyst of Bartholin's gland, caruncle of the urethra or hypertrophic enlargement of the labia may be cured by appropriate treatment. Certain conditions of the vagina, such as imperforate hymen, transverse septum of the vagina, vaginitis, vaginismus and lacerated perineum, may be corrected. Abnormal conditions of the ovaries and tubes are more difficult to diagnose, excepting where extensive pathological changes have taken place, as, for instance, in larger pus tubes, ovaries, cysts, etc., and it is usually for symptoms other than sterility that the patient presents herself in such cases. Small parovarian cysts and dermoids may cause no symptoms, but if diagnosed, should be removed. Slight adhesions following a former slight pelvic peritonitis or parametric exudate, may involve the tubes and ovaries and cause sterility. A number of cases are reported where these have been broken up, and the patency of the tubes restored and conception followed. But no operation should be done for these conditions, excepting at the earnest solicitation

of the patient, and then only by a skilful surgeon. If operation is decided upon, vaginal section is to be recommended as the safest procedure.

In the uterus we meet with many conditions which may cause sterility. The majority of them, however, act similarly in so far that they cause an unhealthy endometrium. The various versions, flexions, and partial or complete prolapse, are usually accompanied by an endometrium which is unfit for the reception of an impregnated ovum—endometritis. This condition should be treated and the malposition rectified. Uterine polypi, or submucous fibroids, should be removed. But by far the greatest number of women who present themselves in private practice and at the clinic on account of their sterility will be found upon examination to have an antiflexed uterus. Upon enquiry, most of these women give a history of dysmenorrhea. The uterus is usually small and poorly developed, and in the majority of cases there is an undue elongation of the cervix and a pin-hole os. In a fewer cases there is a small os associated with a short and rounded cervix. There is usually an irritable condition of the endometrium and a slight leucorrhea, and granular erosion or excoriation of the cervix may be present. These women are the ones for whom much may be hoped by treatment. The surgical treatment of this condition is not new and at present several methods are in vogue.

The safest and most reliable method is dilatation, curettage and packing the uterus with gauze. Electricity and local massage are to be condemned. Tents, stem and other pessaries add an element of danger which ought to be avoided. Repeated dilations without anesthesia is not to be recommended. The operation should be done under general anesthesia, and the patient prepared as carefully as for a major operation. The presence of inflammation of the adnexa is a contraindication to operation. The length and direction of the cervical and uterine canals, and the amount of stenosis are determined by the uterine sound. Careful, slow dilatation of the cervix should be made to a size about large enough to admit a finger, and until the constricting fibres are thoroughly paralyzed. The endometrium is carefully removed with a sharp curette, and as completely as possible. The uterine cavity is then thoroughly wiped out with iodoform gauze wrapped around the curette. Any remaining shreds of tissue are caught in the meshes of the gauze, and are in this manner more completely removed than by irrigation. If the cervix is elongated, it ought to be dealt with by one of the operations devised by Sims, Schroeder, Dudley or Pozzi, the operator choosing whichever operation seems most suited

to the case in hand. The uterus is then firmly packed with 5% iodoform gauze, and the vagina lightly packed, and drainage provided in an antiseptic field, if this is necessary. The gauze stimulates the uterus to contract, bringing more blood to the part, strengthening the uterine muscle fibres and improving nutrition. The patient should receive fairly good-size repeated doses of ergot internally for the same purpose. The gauze is removed in about four days and hot saline or hot boracic acid douches continued for a week or ten days. The patient is usually kept in bed about a week.

In treating cases of sterility by surgical measures, the general health of the woman must not be lost sight of. A systematic course of dietetic, hygienic and tonic treatment is often necessary. Besides this, it is essential that young couples, and sometimes old couples, should be properly instructed as to their mode of living. Excessive sexual relations or excessive sexual excitement is often a cause of non-reproduction. Absence of sexual desire or sexual pleasure are not in themselves a cause of sterility, but they are probably significant of some pathological condition being present.

In conclusion, it may be remarked that patience is required in the treatment of sterility. Even after the reproductive tract is put into as nearly normal a condition as possible, conception may not take place for some months, and in some cases conception may never occur, owing perhaps to some condition being present which the surgeon is unable to discover or correct. But in a large percentage of cases the attempt will be successful, and the joy which attends this result will more than compensate for the disappointment which attends a failure. And in the cases where the effort meets defeat, if due care has been exercised, there should never be a bad result, and the woman, even if she cannot have a baby, will be no worse off than before; in fact her general well-being should be improved.

GLIOMA OF OPTIC THALAMUS.

BY W. C. HEGGIE, M.D., TORONTO.

Ruth Taylor, ten years of age, fourth of seven children, six living; one died in infancy of ilioocolitis; father and mother healthy; no history of any specific disease; temperate; family history good on both sides. First saw child on December 16, 1905.

Face was drawn to right side; internal strabismus of left eye; head inclined backward; walks with a kicking motion of left foot; patellar reflex exaggerated on left. Babinski's sign on left foot. Mouth egg-shaped, with large end to right. Seemed fairly intelligent, and on calling two days after she remembered me and my name. On sleeping she relaxed perfectly and looked normal.

Past History.—Healthy, except measles, until September, 1908,

1st. Noticed that she slept more than usual, going to bed at 6 p.m., and not waking until 8 a.m.

2nd. Noticed internal squint of left eye.

3rd. Mouth pulled to right side.

4th. Head pulled to right side.

5th. On eating, while raising the right hand she would lift up the left hand.

6th. Noticed the left foot drag and was brought forward with a kicking motion.

7th. Began to throw head backward.

8th. Complained of wanting to fall backward.

These symptoms were progressive and in the order named. There was an obscure account of a fall. I gave a tentative diagnosis of brain tumor on right side, and asked to have Dr. Clark, of the Asylum, see her.

Drs. Clark and Jones, of the Toronto Asylum, saw her about the 20th, and agreed that it was a tumor, probably of the right cerebellum.

On the 26th December she began to lose control of bladder and rectum, so I advised having her taken to the hospital for operation. She went to the Western Hospital, December 27th, was operated on the following afternoon, December 28th, by Dr. G. Bingham. The first stage of the operation, removing the bone and completely exposing the cerebellum, was completed successfully, and the patient removed to the ward. She died thirty hours after from shock. On post-mortem the trouble was found to be a glioma of right optic thalamus.

COMMENTS BY DR. ERNEST JONES, M.R.C.P. (LOND.).

At the autopsy I performed on the case just related by Dr. Heggie, there was, to our surprise, no tumor visible to the naked eye. As, however, the optic thalamus on the right side was darker and of a firmer consistence than its fellow, I removed it, together with some other portions of the brain, with a view to further examination. On studying it by means of the routine staining methods for cerebral tissue one found that the thalamus was the site of an

infiltrating tumor. From the character of the cells and supporting tissue this was evidently of a gliomatous nature. The nervous tissue had been largely destroyed, but there was hardly any evidence of nervous degeneration of toxic origin, so that the mechanical factor was the dominant one. The mass occupied the posterior two-thirds of the thalamus and extended for a short distance beyond its margin.

Thanks to Dr. Heggie's courtesy I had the opportunity of seeing the case on one occasion during life, though under circumstances that prevented examination thorough enough to arrive at any precise diagnosis as to the seat of the lesion. I might therefore add a few words on the clinical side of the case. One matter that reflection on the case prominently brings out is the caution that should be exercised before attributing an absolute localizing value to any single physical sign of cerebral tumor, and the greater accuracy attained by carefully considering all aspects of a case and by estimating the significance of a given sign only in relation to the others present. The insidious temptation to seek one or two short cuts to diagnosis has strenuously to be avoided, for there are very few such direct routes, at all events in neurological diagnosis. For instance, it is possible that in the present instance undue stress was laid on the peculiar attitude of the head—that combination of lateral flexion, extension and contralateral rotation, that is known under the name of the cerebellar attitude. This symptom is especially common in cases of cerebellar disease, but I have known it to occur in cases of tumor of the frontal lobe, and it is by no means rare for it to be produced by pressure on the cerebellum exerted by a tumor of the cerebello-pontine angle. The differential diagnosis between a tumor of the cerebellum and one of the contralateral optic thalamus often presents great difficulty, the anatomical connections between the two structures being especially intimate. It is not always easy, for instance, to distinguish between the dynamic form of ataxia that is characteristic in cerebellar disease, and the involuntary and inco-ordinate movements that in thalamic cases interfere with volitional motor activities. These latter movements are sometimes even confounded with choreic movements, and the disastrous mistake committed of making the diagnosis of chorea; this, I understand, happened in the present case before it was seen by Dr. Heggie, though careful study of the type of movement should, quite apart from consideration of other physical signs, prevent such an error.

The case similarly illustrates the importance of forming a standard of relative importance for each physical sign, so that when two signs apparently contradict each other we shall know to which

of the two should be attached the greater weight. For instance, the hemiplegia in the present case pointed to a right-sided affection, whilst a transitory paralysis of the abducens nerve pointed to a left-sided one. As, however, the latter symptom is often produced indirectly through general intracranial pressure—or, more accurately speaking, through longitudinal stretching of the cerebral axis, as Collier has pointed out,—it was easy to realize that it should be disregarded as a sign of localizing value and not allowed to discredit the correct conclusion indicated by the hemiplegia that the lesion was on the right side. In forming such an opinion great care had to be exercised to make certain that the left hemiplegia was of the cerebral type and not of the cerebellar, for in the former case the lesion would be right-sided; in the latter left-sided. It would be out of place here even to enumerate any of the large number of differential points that enable us to distinguish between the two, but I may point out that here again the difficulty of distinguishing between a cerebellar and a thalamic tumor is shown, for a hemiplegia due to thalamic disease resembles that due to cerebellar more closely than does any other cerebral hemiplegia, except possibly the cortical form. Not only may thalamic movements be mistaken for cerebellar ataxy, as has just been mentioned, but, further, the thalamic hemiplegia is apt, like the cerebellar one, to be of a flaccid variety and to be unaccompanied by those changes in the reflexes that we regard as distinctive of interruption of the cerebro-spinal motor paths.

In conclusion, we are again reminded of the fact that every case of cerebral tumor, if carefully studied, serves to refresh or expand our knowledge concerning the important question of cerebral localization.

ESOPHAGOSCOPY AND TRACHEO-BRONCHOSCOPY.*

BY D. J. GIBB WISLART, M.D., TORONTO.

The use of the method of examination of the larynx, trachea, bronchi, esophagus and stomach by the technique known as bronchoscopy and esophagoscopy has been slow in coming into employment in Canada. So far as Ontario is concerned, it was employed once by Professor McDonagh in the extraction of a foreign body from the lung of a child, and has been also several times made use of by

*Presented to the Academy of Medicine, Toronto.

myself and Dr. Boyd for examinations of the esophagus and bronchi and in the removal of papillomata from the larynx in the Nose, Throat and Ear Service of the Hospital for Sick Children in this city, as well as in our private practice. I am unaware of its use by others.

Having enjoyed the opportunity of witnessing the demonstration of Jackson, of Pittsburg, and later of Professor Killian, of Freiburg, in New York and Philadelphia last year, I resolved to become better acquainted with the technique of this method during my visit to Europe, and therefore spent several weeks at the clinics of Killian and availed myself of the assistance of Von Eicken, his first assistant, to perfect myself in the use of the instruments upon the living patient.

Those who have followed the literature concerned, especially the various articles of Killian, Von Schr etter in Europe, Patterson and Kelly in England, Jackson, Mosher and others in the United States, are aware that the instruments have been rapidly changed and improved, and that the methods of securing an illumination of the field are two, viz., the placing of the light at the eye of the examiner or at the distal end of the tube. The latter is that employed by Jackson, the former the one exclusively used in England and the Continent. I do not intend to enter into any discussion of the respective merits of the methods of lighting referred to above, but will leave this for a future occasion.

The instruments which I will show you are those of Killian, as perfected by Brunnings, and placed upon the market for the first time this summer.

Before proceeding to demonstrate the instruments, and what may be seen thereby, allow me briefly to state the conditions which appeared to necessitate this invention, and under which they may be serviceably employed.

1. *Direct Laryngoscopy.* This method affords the surgeon the opportunity of inspecting the larynx, and of dealing with papillomata, foreign bodies, etc., at close range, and directly under the eye, without the intervention of a throat mirror, a not inconsiderable advantage.

2. *Direct Bronchoscopy or Tracheo-Bronchoscopy.* Here, without any external incision, the entire trachea and bronchial tract, even into the smaller tubes of each of the several lobes, may be examined in detail. This method is indicated:

(a) If there has been inhaled a foreign body, which is too large to pass back through the larynx readily.

(b) In examinations for aneurisms, enlarged glands, or enlarged thyroids, causing lateral or thoracic pressure, or projecting

into the lumen of the tube, or giving rise to paralysis of the recurrent nerves and dyspnea.

(c) In dyspnea arising from syphilitic strictures low down in the trachea or bronchi.

3. *Indirect Bronchoscopy* is the term applied when the instrument is introduced through an opening in the trachea (tracheotomy wound). This method is indicated:

a. When the trachea has been previously opened.

b. When a foreign body is too large to pass through the larynx—a common example is a tooth plate.

c. When the object is sharp, and apt to wound the larynx—a fish-hook, pin, or thin piece of bone.

4. *Esophagoscopy*. The examination of the entire tract of the esophagus, and the greater curvatures of the stomach. This method of exploration permits and decrees the abolition of coin catchers, bougies, brushes, etc., in the removal of foreign bodies, in the diagnosis of strictures, malignant growths, etc.

It is now possible to examine the entire tract with ease and safety, taking each step downward under direct observation, and good illumination, and therefore all blind probing in the dark is unnecessary and perhaps criminal.

Whenever possible, it is best to secure Roentgen ray plates of the neck and chest prior to examination.

FOREIGN BODY IN THE ESOPHAGUS.

BY D. J. GIBB WISHART, M.D., TORONTO.

A young man, aged 26, referred by Dr. D. N. McLennan, with the history of having swallowed raw oysters a week previous, and a subsequent sensation of his throat being scratched by something sharp, with soreness and pain in the region of the larynx. Laryngoscopic examination had revealed nothing, but the patient could swallow no solid food, and liquids only with difficulty and accompanied by acute pain. The breath was becoming very offensive and there was sleeplessness and distress. A flexible bougie had been carefully passed by Dr. Charles M. Stewart, and upon its withdrawal a portion of what resembled the fringe of an oyster was found adherent to it. Further interference except under direct observation being deemed dangerous, esophagoscopy was advised.

Under general anesthesia the largest tube was passed carefully, and at a point nineteen cm. from the teeth the upper edge of what proved to be a piece of oyster shell presented itself, partially concealed by blood clot. A forceps was introduced, and the shell seized with great precaution, lest it might have pierced the esophageal wall. It came away in four pieces and displayed a jagged wound extending through the inner coats for over half an inch in length and in the vertical direction. The shell was extremely irregular in outline and thin, and larger than a copper coin. The tube was examined for some distance further down, but no further evidence of shell or injury discovered.

Medicine

GRAHAM CHAMBERS, R. J. DWYER, GOLDWIN HOWLAND, GEO. W.
ROSS, WM. D. YOUNG.

Pituitary Tumor in its Surgical Relations. By ARCHIBALD CHURCH, M.D. *J. A. M. A.*

The functions of the gland are related to (1) Adiposity; (2) General atrophy; (3) General physical retardation; (4) Aeromegaly. Symptoms of its enlargement when aeromegaly is absent are (1) X-ray diagnosis; (2) Optic atrophy; (3) Bi-temporal hemianopsia; (4) Impotence and amenorrhea. Operation by lateral skull and intranasal methods are possible, and the author advises the lateral. The six cases described evidence the symptoms: one of the operated-on cases improved, two died, and three refused to undergo it.

G. W. H.

The Reflex Mechanism and the Clinical Significance of the Important Reflexes. By S. P. GOODHART, Ph.B., M.D., New York. *N. Y. M. J.*

Goodhart reviews the value of the common reflexes in a lengthy article. He lays stress on three centres for reflex activity, spinal, basilar, and cortical; all three active in health, but the higher controlling the lower. He compares spinal with cerebral lesions, and states that while the tendon reflexes may be plus in both, yet that the condition of hypertonus in the latter will distinguish them. This statement is not in accord with our usual experience.

In a complete transverse lesion of the cord he states that muscle tone is not only lost, but also faradic response. (If this latter statement is correct then Bastian, who described the condition, must have erred in his cases.)

In cerebral tumors he considers the hypertonus and increased reflexes due to uncontrolled cerebellar influence.

Increase of deep reflexes in rheumatoid arthritis and decrease in typhoid and pneumonia are referred to.

G. W. H.

Remissions in General Paralysis: A Report of three Cases, Including Post-Mortem Examination. By MORRIS J. KARPAS, M.D., *N.Y.M.J.*

Karpas discusses Remissions in General Paralysis and gives a list of those stated by other authors, adding those of his own. The period of remission varies from months to years, and occurs most commonly in those showing exalted symptoms.

G. W. H.

Histological Changes of the Spinal Cord in Pernicious Anemia Apropos of a Case with Diffuse Degeneration. By ALFRED GORDON, M.D., Philadelphia. *N. Y. M. J.*

Gordon describes a case of combined degeneration of the spinal cord accompanying pernicious anemia. The main features were that, anatomically, the lesion affected all the columns of the cord, but diffusely and chiefly in the dorsal-cervical region, and clinically there was some disassociation of sensation present in the arms. He discusses the ordinary theories as to there being a primary form of this disease with late or absent anemia, and a secondary type consecutive to pernicious anemia.

In commenting on this article one may state that there appear to be a great number of cases parallel to these toxic and anemic sclerosis in Canadian practice, which are usually not diagnosed, as the symptoms are usually difficult. The anemia like that of Risien Russell's series is usually severe, but typically secondary in character, and the clinical signs are frequently misleading. They are true toxic sclerosis, and the anemia is probably due to the toxemia.

In pernicious anemia we meet with cases which are similar clinically, and pathologically are frequently much akin to pure toxic cases—a contrary view to that of Russell and his followers.—Surely the probable toxic causes of many cases of pernicious anemia may in one case cause cord degeneration parallel to the degeneration seen in toxic cases when any anemia is consequent on the same origin.

I judge that not only will these related cases be classed together in the future, but that cases will be found intermediate to the toxic arthritis, so that joint, nerve and cord cases will all be considered as a unity.

G. W. H.

Psychiatry

W. C. HERRIMAN, ERNEST JONES.

Marie's Revision of the Aphasia Problem. *New York Medical Journal*, August 7th, 1909.

This article, taken from *Neurologisches Centralblatt*, discusses at some length the aphasia question, with reference more particularly to Marie's conclusions. The writer finds the idea that the lenticular and caudate nuclei are important motor mechanisms in the function of speech quite untenable. He recognizes that Broca's convolution has been accorded considerable extension and modification, but thinks too much is claimed in the general identification of "the external surface of the third frontal convolution." The writer finds that Marie's and much other recent work but add confusion to existing complications, and concludes that "the original ground plans of Broca and Wernicke are still valid as working principles."

W. C. H.

The Future Development of the Custodial Insane Asylum in Bavaria, Rehm. *Zentralblatt für nervenheilkunde und Psychiatric*.

The *Journal of Nervous and Mental Disease* refers to this article at some length. It contains many suggestions, looking to the better care of the insane in Bavaria, but some of the conclusions reached are worthy of consideration in Ontario to-day. The main points reached are as follows:

"Cities with a population of 40,000 should have psychiatric wards in general hospitals for temporary treatment and detention of the insane. Idiots and epileptics are to receive medical attendance, and wards for them should be created in the insane asylums. A school for abnormal children is necessary, and a competent physician with psychiatric training should be connected with it. A juvenile who commits a crime should, before facing justice, be examined and observed by a psychiatrist. Special wards for the treatment of alcoholics are of the utmost importance and they should be associated with the insane asylums. Hospitals for nervous diseases are desirable. Criminal insane, insane criminal and criminal feeble minded are to be separated from the general insane. Societies to aid discharged patients should be organized."

W. C. H.

A Study of Some Phases of Family Psychoses. By JOHN GERALD FITZGERALD, Harvard Medical School. *Maryland Medical Journal*, July, 1909.

This study in heredity is an investigation into the relation that may exist between family types in general and family types of mental disease, if such exist. Ought we to be able to say in advance that a member of a given family is likely to develop a mental disease of a certain type?

A father and son developed symptoms fundamentally very similar, but with the son the onset was earlier and the progress more rapid. This increasing intensity of the degenerating process appears in other cases also and may be a method of nature for eliminating the unfit. In the several cases selected by the writer the same feature is very generally apparent, though not invariably so. The statement, which must be taken in a very broad sense, is made, that "there appears to be a similarity in the form of mental disease that various members of one family develop" and "there is also a gradually increasing tendency to the development of a type where pronounced mental enfeeblement develops comparatively early."

This is but the first installment of the author's paper presented at the American Medico-Psychological Association.

The further collection of material and conclusions will be awaited with interest.

W. C. H.

Calcium Hypophosphite in the Treatment of Epilepsy By M. CICARELLI. *La Clinique*, July, 1909, and *New York Medical Journal*.

The author, encouraged by favorable reports on the treatment of Epilepsy with lime salts, commenced employing Calcium Hypophosphite, hoping to derive some reconstituent effect from the phosphorus. Calcium Hypophosphite was given in doses of from ten to fifteen grains, three times a day. Excellent results are reported from its use in twenty-five cases.

The author considers this drug preferable to the bromides in its effect upon the general condition of the patient, but speaks also of its use in connection with the bromides. Used in this way he administers the bromides one week and the calcium salt two weeks in rotation.

W. C. H.

Ophthalmology

D. N. MACLENNAN, W. H. LOWRY.

Prognosis in Eye Diseases, Viewed from the Standpoint of the Patient's Rights and the Ophthalmologist's Duty. By

ALEXANDER DEANE, M.D., New York. *New York Medical Journal.*

Dr. Deane points out, with good reason, too, that too gloomy a prognosis is often given in many chronic diseases of the eye, much to the distress of the patient, and often to the detriment of his mental condition, and that too often not enough pains are taken to soften the prognosis by very carefully selected statements, or to improve the vision by a glass, even if it be only to the extent of another letter or two. In this connection he mentions the following chronic conditions, in which one should be very careful in the prognosis: (1) Extensive corneal disease and opalitis; (2) Iridocyclitis; (3) Retinitis pigmentosa; (4) Optic atrophy and high degrees of toxic amblyopias; (5) Glaucoma; (6) Progressive high myopia; (7) Detachment of retina; (8) Intra-ocular hemorrhage; (9) Cataract; (10) Injuries and operation effects.

He gives instances in these cases where time, nature and treatment have made marked improvement in the condition which at one time seemed beyond improvement, and where pains in the selection of a glass have been the means of improving the vision, much to the convenience and happiness of the patient. He thinks that the term cataract should be very judiciously used, if used at all, before a patient, as the patient is apt to connect with the term blindness, serious operations, etc., but that one should say an "opacity," a "muddiness," or a "speck" in the lens, and set to work with great pains to try improving the vision with the proper lens, or consider the advisability of prescribing a mydriatic.

This, we think, is very excellent advice, and if each ophthalmologist would take the suggestions offered in this article, to heart, many patients would be spared much worry and unhappiness.

W. H. L.

Rhinology, Laryngology and Otology

GEOFFREY BOYD, GILBERT ROYCE.

A Case of Acute Mastoiditis with Lateral Sinus Suppuration and Cerebellar Abscess as Complications of the Operation for Removal of Tonsils and Adenoids. By L. A. PARRY. *The Lancet*, June 26th, 1909.

A child, aged seven years, had an operation for the removal of tonsils and adenoids. She was kept in bed five days and discharged as convalescent. Nine days later entered the hospital with the history of ear trouble of four days' standing. A mastoid operation was done on the right side, and the antrum found full of pus. No improvement resulted. The second operation was performed and the lateral sinus found to be involved. The child did not improve and showed pyemic symptoms. A third operation was performed, the old wound opened up, and the jugular vein ligated. Convalescence was slow. Two months after she developed a facial paralysis on the side operated on. The child was later admitted to the hospital and a fourth operation was performed, which showed her to be suffering from a cerebellar abscess.

The writer is of opinion that otitis as a complication of the operation for the removal of adenoids and tonsils is generally due to the sepsis spreading up the Eustachian tubes from the raw surface left round the orifices by the scraping, and adopts the plan of scraping only strictly in the middle line. He also advocates keeping the patient in bed in a warm room for several days after the operation.

G. R.

Preventable Deafness. W. SOHIER BRYANT. *Journal of the A. M. A.*, July 10th, 1909.

Bryant considers that the laity are not sufficiently enlightened on the subject of the prevention of deafness, and claims that nearly all deafness is preventable.

In his description of the etiology he lays stress on the action of organisms and toxins which are generated by diseased conditions in the upper respiratory tract. They enter the neighboring structures and produce a toxic vasomotor paresis or alteration in the blood supply to the ear. These causes should be searched for and corrected, and the nose-pharynx particularly should be kept in a healthy condition.

G. R.

Genito-Urinary Surgery

T. B. RICHARDSON, W. WARNER JONES.

The Surgical Treatment of Stone, Tuberculosis, and Tumors of the Kidney. By DR. ARTHUR DEAN BEVAN, of Chicago.
Canadian Journal of Medicine and Surgery.

Before taking up these subjects individually, Dr. Bevan gives a brief resume of the development of the surgery of the kidney within the past twenty-five years, showing how movable kidneys are now fixed by proper operation, stones in the kidney are definitely located by the X-Ray, and safely removed by incision of the afflicted organ; tuberculosis is accurately diagnosed by means of the microscope and cystoscope, and the patient's life saved by a timely nephrectomy; tumors of the kidney are recognized and removed; acute hematogenous infection of the kidney is now recognized and relieved by nephrectomy; Hydronephrosis and Pyonephrosis are recognized and treated by timely surgical interference; and, lastly, even Bright's Disease (chronic) has been treated by decapsulation, although with rather unsatisfactory results.

In the differential diagnosis of stone, he makes the following suggestions:

- (1) Importance of a careful history.
- (2) Pain occurs in variable intensity in most cases; the pain often being in inverse ratio, according to the size of the stone.
- (3) Hematuria varies from a mere trace (only found under microscopic examination) to profuse, or even fatal, hemorrhage.
- (4) Other urine findings, such as renal sand, crystals, renal or ureteral epithelium, leucocytes and pus.
- (5) Vesical tenesmus frequently present when stone is moving.
- (6) Value of cystoscopy and ureteral catheterization.
- (7) Functional tests (indigocarmine and phloridzin tests), to determine functional activity of the organs; and, lastly:
- (8) The importance of examination by means of Roentgen rays.

After a definite diagnosis of kidney-stone is made with the X-Ray, other conditions warranting, it should be removed.

If a single stone is found in the pelvis of the kidney, of moderate size, and in a non-suppurative case, Dr. Bevan favors an incision through the posterior wall of the pelvis, rather than through the substance of the kidney proper.

Where a suppurative process is going on, the kidney should

be opened and drained—in the hope of saving some sound kidney substance, but where the destruction of the organ is extensive, while the other kidney is functioning in a satisfactory manner, a nephrectomy of the diseased kidney should be done.

Tuberculosis of the Kidney.—This condition more frequent than generally supposed: Thus, in a series of 5,000 post-mortems, 3 per cent. were found to have tuberculous lesions of the kidneys, while of a large number of persons dying of tuberculosis, 10 per cent. showed involvement of the kidney.

The condition is due to hematogenous infection, and in the great majority of cases is unilateral.

Three types are recognized:

(a) Cavernous type, several foci in either the upper or lower pole of the organ, which break down and form tuberculous cavities of varying size.

(b) Disseminate type—a multitude of small lesions throughout the kidney, resembling somewhat the acute hematogenous pyogenic infection of a single kidney.

(c) An ulcerating lesion of the tip of the pyramids.

He draws a distinct line between genital and urinary tuberculosis, this latter beginning always in the kidney, and later descending to the bladder, while the former begins in the epididymis, occasionally in the prostate, and later extending to the vas deferens, seminal vesicles and bladder; in the female it often begins in the tubes and thence spreads to peritoneum, uterus, and ovary. Gonorrhea and other pyogenic infections of the urinary organs are important etiologic factors.

The symptoms of kidney tuberculosis are practically nil, until the process has extended to the calyces or pelvis, or perinephritic tissues. Pain and tenderness in the kidney region vary. Hematuria occurs in about 25 per cent. of cases. Pyuria is one of the most constant symptoms, often associated with mixed infection, due to the colon bacillus.

Tubercle bacilli are to be looked for in the urine. The ureters should be catheterized to verify the presence of a sound second kidney. The cystoscopic examination of these patients is of great importance, and often reveals redness and swelling of the mouth of the ureter on the affected side.

Three methods of treatment have been advocated:

- (1) General hygienic.
- (2) Specific treatment with tuberculin.
- (3) Surgical treatment.

As spontaneous cure is rare, the first method of treatment is of little avail, save as an adjunct to more radical means.

In bilateral tuberculosis of the kidneys hygienic plus tuberculin treatment should be employed.

Primary nephrectomy for early unilateral kidney tuberculosis is the treatment of choice.

Neoplasms of the Kidney.—Albrecht, recently reporting the malignant tumors from Hohenegg Clinic, during the last ten years, found 32 cases, and of these 28 were hypernephromas, 3 sarcomas, and 1 a carcinoma of the pelvis of the kidney. The experience of Uenhäuser, Hirschfeld, and Dr. Bevan, would seem to show unmistakably that the great majority of malignant growths in the kidney, in adults, are hypernephromas. In children, sarcomas are more common. The hypernephroma of the adult runs rather a slow course. The primary lesion may not be diagnosed until metastases occur.

The common symptom is hemorrhage, occurring in probably 80 or 90 per cent. of cases. The presence of kidney swelling is sooner or later to be made out, while pain and discomfort are present in a large percentage of cases. In some cases violent renal colic occurs, due to plugging of the ureter with a blood clot. Cachexia may be absent, or late in making its appearance, except in cases where the loss of blood has been severe. Varicocele may develop rapidly, and does not disappear rapidly, or at all, when the patient assumes the recumbent position. Hypernephromas tend to form late metastases, which involve especially the bones, and the tumor also manifests a tendency to grow into the renal vein, and thence extend through the venous circulation. Sympathetic extension is rare.

The prognosis after operation is extremely bad. The growth may be removed by either the lumbar (extraperitoneal) route, or by the abdominal (transperitoneal) route, the former being the favorite method with Dr. Bevan. In cases where the lesion has extended to neighboring structures, making the case inoperable, the operation should be made simply exploratory, and the wound closed without further interference, save that from X-Ray treatment, which sometimes seems to retard the further development of the neoplasm.

Summing up, then, Dr. Bevan advocates the following routine:

- (1) X-Ray to exclude stone.
- (2) Microscopic and cystoscopic examination, to exclude tubercle.

- (3) These being negative, the presence of a mass of palpation, together with the presence of hematuria, points, in the majority of cases, to the existence of hypernephroma.

T. B. R.

Anesthetics

SAMUEL JOHNSTON.

A Report from the Routine Use by the Open Method of a Mixture of Chloroform and Ether. By F. W. HEWITT AND JOSEPH BLUMFELD. *The Lancet*, July 3rd, 1909.

For the anesthetic the best preparations of chloroform and ether were used, and the mixture made of two parts by volume of chloroform with three parts by volume of ether.

A Skinner's mask was used, and over its wire frame was stretched a single layer of thin flannel. The vault of the mask is high enough not to touch the nose, when its rim rests on the face. A small tube is passed through the middle of the stretched flannel for use when oxygen is required.

In using the mixture a gradual process is adopted. After a few breaths with the mask adjusted, the mixture is given, a few drops at a time, from a regulating drop bottle, capable of giving the mixture in single drops, or in a continuous stream.

For two minutes not more than a quarter of the mask is kept moist, and from this time on, it is given more freely, until, in the case of men, the whole surface of the mask is moist; in women, three-quarters, and, in children, one-half. In all kinds of cases this method has been adopted, as pan-hysterectomies, removal of double pyosalpinx, appendicectomies, excision of rectum, etc.

Moreover, patients were of all ages, physique, and states of health.

One patient, suffering from pneumonia, had oxygen simultaneously administered through the tube passing through the mask.

The time of induction is reckoned from the moment of commencement of inhalation to the moment when the patient is ready for operation.

The average induction period, in a series of hospital cases, was $8\frac{1}{2}$ minutes.

With children, 5 minutes was the rule, and this was the time also in the case of a very anemic woman, ill with peritonitis.

Secretion of mucus and saliva is not a feature of the induction stage with this anesthetic.

When anesthesia is once established about half the mask is kept moist, but in difficult subjects, the whole of the surface may have to be kept so.

The condition of the patient during operation is highly satisfactory, with regard to the state of the circulation, respiration, muscular relaxation, and immobility of the patient.

The type of anesthesia obtained is more like that used with low percentages of chloroform vapor, than like that seen with ether.

Speaking generally, recovery from the anesthetic takes place rapidly, and without any disagreeable after-effects, provided the patient has been properly prepared.

Practically, 24 hours after operation, the patient was free from sickness, and nausea.

The conclusions drawn, are that this mixture, used as described, is a trustworthy and comparatively safe anesthetic.

By this method chloroform is rendered safer than when administered *per se* on a mask, and very much safer than when administered on lint or a towel. The view is expressed that the administration of undiluted chloroform on a towel or lint should be proscribed in practice.

This method is not safer than ether anesthesia, *while the patient is upon the operating table*. But if the risks of ether anesthesia are taken into account, *after the operation*, the method compares favorably with all known methods of etherization, as far as safety is concerned.

S. J.

Reviews

Diet in Health and Disease. By FREDENWALD and RUTHAIL. Third Edition. Philadelphia: W. B. Saunders Company. Canadian Agents: J. A. Carveth & Co., Toronto.

The third edition of this standard handbook on diet has been brought up to date by revision of the second edition and by the addition of some fresh data.

Its main feature is its concise, practical style: The first part descriptive of the physiological side, is naturally brief; the second, the study of Foods themselves is a first-class quick reference, and valuable to the beginner, rather than the advanced student.

Turning to the Applied Dietetics, the book is most satisfactory, particularly on the subject of Infant Feeding, which gives one of the quickest and best synopsis of the subject that is possible. The sections on Diet in Diseases of the Stomach are, perhaps, the most useful, while those on Diabetes, with a full description of the principal diets used there, and on Obesity, are both excellent.

The appended Talks and Hospital Dietaries are of value to those interested in this particular work.

G. W. H.

A Hand-Book of Diseases of the Nose and Throat. By EUGENE S. YOUNG, M.D. Wm. Green & Sons.

This is a work comprising some four hundred pages and is a very fair presentation of the subject. It is neatly printed, and the illustrations are good, several of them being colored. The anatomy and physiology of the various regions are clearly described, and the general classification of the diseases is simple.

The author states that the work is intended solely for the use of the general practitioner, so that he confines himself chiefly to an exposition of the more common diseases. These are clearly described, but there is room for a more detailed description of the various operative procedures.

The author does not seem to be convinced of the advantages of tonsillectomy over simple tonsillotomy, and states that he has had no experience with the former operation. We are rather surprised at this, for it is pretty well established that the diseased tonsil plays an important rôle in general systemic infections.

On the whole, the work would be a safe guide in the hands of those in general practice.

G. R.

The Romance of Medicine. By RONALD CAMPBELL MACFIE, M.A., Aberd., M.B., C.M. Illustrated. London, Toronto: Cassell & Co., Limited.

A rather interesting work to the physician and those interested in the advancement of science has been compiled by Mr. Macfie, after an apparently great amount of labor. Facts are recorded with accuracy whilst the text sets forth the imaginative aspect and romantic character of medical discovery. Altogether it is a very readable volume.

Report on Plague in the Gold Coast in 1908. By W. J. SIMPSON, M.D., C.M.G., etc. London: J. & A. Churchill.

This report, which embraces a volume of fifty-five pages, is minute and comprehensive. It contains case reports of a number of cases.

Third Report, Wellcome Research Laboratories. By ANDREW BALFOUR, Director. Toga Publishing Co., 101 Coristine Building, St. Nicholas Street, Montreal.

The Toga Publishing Co. have been authorized, on behalf of the Department of Education of the Sudan Government, to undertake, in future, the issue in the Dominion of Canada of the Reports of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum. Two volumes had previously been issued, covering the period from the foundation of these laboratories in 1903 to 1906. The Third Report, a copy of which is sent herewith for review, completes the record up to 1908.

The Sudan Department of Education has taken this step to meet the considerable demand for these reports which has arisen amongst medical men and other scientific workers interested in tropical research. Hitherto only a limited number of copies has been issued, and these reports have been sent gratuitously to Government departments, and to various medical, sanitary and other institutions interested, as well as to a few leading authorities in the subjects dealt with.

The work of these laboratories has been so far extended that the latest report contains some 480 pages of detailed records of many interesting experiments and researches, principally connected with tropical medicine. This volume is profusely illustrated and includes many valuable colored plates.

Simultaneously with the Third Report, and as a supplement to it, is published a review of the progress made in tropical medicine.

during recent years, compiled by Dr. Andrew Balfour, the Director of the laboratories, and Dr. R. G. Archibald.

The great cost of production of these reports, especially in their present voluminous dimensions, necessitates making a charge for them now and henceforth. The price fixed in each case is as moderate as is consistent with the cost of publication, and any profit made will be devoted by the Sudan Department of Education to a special fund for future publications of the laboratories.

All applications in the Dominion of Canada for current publications and for reprints of the First and Second Reports of the Wellcome Research Laboratories, Khartoum, should be addressed to the Canadian depot at the above address.

A Theory Regarding the Origin of Cancer. By C. E. GREEN. Edinburgh and London: Wm. Green & Sons.

This little book gives in a concise form the author's view as to the origin of cancer, viz., that it is of parasitic origin. He starts out with the knowledge that cancer is common among certain tradespeople and in certain districts. From an analysis of these he finds that the acid oxides of sulphur are present in all, and these he believes so act upon the tissues that the specific fungus is allowed to grow.

The difficulty in recognizing the parasite is in many instances, he thinks, a question of staining. While there are probably very few who to-day believe that carcinoma is due to a parasite, still the author has dealt with the subject in a very interesting manner, and the book is well worth the hour spent in its reading.

G. E. W.

Bier's Hyperemic Treatment. By WILLY MEYER and SCHMIDT-DEN. Philadelphia: W. B. Saunders Company. Canadian agents: J. A. Carveth & Company.

Only a year has elapsed since the former edition of this book was published. The scope of the work has been considerably extended and new illustrations have been introduced. Two types of print have been inserted, the larger being used only when the authors from personal experience recommend the treatment prescribed. So similar are the types, however, that considerable care is necessary to obviate confusion.

After a careful perusal of this work we cannot but think that the authors have allowed their enthusiasm on behalf of the treat-

ment to warp their better judgment. The remedy is advocated for so many varied conditions, from an ordinary sty or headache to an osteomyelitis of the femur or a cerebro-spinal meningitis, and all with good results, that we think that the natural course of disease in general has been overlooked and these taken as cures, while the failures have been attributed to errors of technique or the case was not seen soon enough.

They quote several cases throughout the book, and after practically all one might reasonably write the words "Proves nothing." For instance, a man aged 24 had his radius fractured in the lower third. For three weeks frequent attempts at reposition were made on account of radiographs showing bad position, and no union had occurred up to that time. The parts were now put in plaster and obstructive hyperaemia eleven out of every twelve hours carried out for some six weeks, at the end of which time good union was obtained—just the result one would expect had the Bier treatment been omitted. And we would suggest that had the radiographs been dispensed with union would have been complete in a much shorter time and with quite as good a result.

A few errors have crept in. Colles' fracture is taken as a typical example of a fracture involving a joint; and tuberculosis of the sheath of the tendo achillis is described.

The technique of the treatment is very explicit, and anyone anxious to give the method a further trial could not afford to do without the book.

G. E. W.

Writing the Short Story. A Practical Handbook on the Rise, Structure, Writing and Sale of the Modern Short Story. By J. BERG ESENWEIN, A.M., Litt.D., Editor of Lippincott's Monthly Magazine. New York: Hinds, Noble & Eldridge.

Whilst this is not in the ordinary course of things a book interesting to the practitioner of medicine, it will, however, be found brimful of literary information, which in many respects will be found helpful to those who write for the medical press. Many doctors are interested in good literature, and a close study of this little book, which nowhere is dull from cover to cover, will enable them the better to discern defects and so improve upon style in medical literature. We think anyone who delights in magazine literature will find this a profitable book to study.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

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Surgery: Walter McKeown, Herbert A. Bruce, W. J. O. Malloch, Wallace A. Scott, George Ewart Wilson.

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GEORGE ELLIOTT, MANAGING EDITOR

Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 203 Beverley St., Toronto, Canada.

VOL. XXXIII.

TORONTO, SEPTEMBER, 1900.

No. 3.

COMMENT FROM MONTH TO MONTH.

Canadian Medical Association Annual Report of General Secretary.—There were two hundred and twenty-eight registered at the 44th annual meeting at Ottawa last year.

When last the Association met in Winnipeg in 1901 you were pleased to elect me your General Secretary. The number in attendance then was 178.

During the succeeding years the attendance was as follows:

Montreal, 1902	330
London, 1903	302
Vancouver, 1904	267
Halifax, 1905	222
Toronto, 1906 (B. M. A. Meeting)	79
Montreal, 1907	235
Ottawa, 1908	228

The total attendance for these seven years 1,463

An average of 209 a year. The previous seven meetings had a total attendance of 1,076, an average of 152 a year.

The total membership at the beginning of the Winnipeg meeting in 1901 was 900. Now the total membership is about 1,500.

Let us review, however, the work of the Association in other respects.

Besides the numerous addresses and scientific papers the Association has produced during the past seven years, which have gone to enrich Canadian, other British and United States medical literature, we have dealt with several questions of practical medical politics.

Established in 1901 in Winnipeg, the Canadian Medical Protective Association has perfected its administration, and has demonstrated to the medical profession of Canada and to others that it is an organization of the first importance in the medical life of the Dominion.

Dominion registration has not come under our attention these seven years, as about that time it had been placed in the hands of Dr. Roddick, who finally succeeded in having passed The Canada Medical Act, now standing as Chapter 137, Revised Statutes of the Dominion, 1906. Again this question comes before us. May we hope that it will be pushed to a final and successful conclusion.

The question of a Bureau of Health for Canada has year after year engaged the attention and consideration of this Association. Time and again the Federal Government has been requested to consolidate its various medical services, at present administered under four separate Departments of the Crown, into one Bureau of Health, under one of the existing Ministers—and then extension and expansion thereof. So far the Association has gotten the assurance from the head of the Government, the Prime Minister: "It is only by knocking at the door that the door will be eventually opened."

Reorganization of the Association has been successfully accomplished, which reorganization looks for the affiliation of all the provincial medical associations and the establishment of a journal to be the official journal of the Association.

A Milk Commission was appointed last year at Ottawa, which has been doing a great amount of work, the results of which will be brought before this meeting.

By Act of the Federal Parliament, assented to May 19th, 1909, the Canadian Medical Association is now an incorporated body.

The several projects before the Association at the present time call for good financial support. In the past the Association has endeavored to do a certain amount of useful work, but year after year it becomes manifest that the work of the Association cannot be carried along as successfully as it should be, and as it could be were its financial position assured. Now that the Association is an incorporated body, it may be permissible to suggest that there may be some members thereof who, either of themselves or through others, could voluntarily contribute to the financial support of the Association, and thus the more effectively ensure the carrying out of those projects the Association has set out to accomplish.

All of which is respectfully submitted.

GEORGE ELLIOTT,

General Secretary.

Canadian Medical Association. In the opinion of many the 42nd annual meeting of the Canadian Medical Association, held in Winnipeg from the 23rd to 25th of August, was the best meeting held in many years. The attendance was the largest, 338 registering; the organization was about perfect and reflects great credit upon the Committee of Arrangements in Winnipeg; the social entertainments were first-class, and the addresses and papers of a high order of excellence. It was noteworthy that two Canadians were selected to deliver the two most important addresses, those in medicine and surgery, which were delivered by Professor Adami and Dr. James Bell, respectively. Canadians also delivered the addresses before the sections on obstetrics and ophthalmology, namely, Drs. Adam H. Wright and R. A. Reeve, Toronto. These all brought out good audiences, as did the symposium on the kidney and the discussion on inter-provincial registration. It was to be regretted that the Milk Commission did not receive as good a hearing as it should have, but this was altogether due to the fact of an excursion crowding too closely upon the time allotted to the discussion on milk. We are of the opinion that this discussion would have been one of the features of the meeting if it had not been for

the accident referred to, as Mr. McGill, chief analyst for the Dominion, Mr. Rutherford, chief veterinary for the Dominion, and Dr. Westbrook, of Minneapolis, were present to take part in this discussion. Those who, however, did remain had the pleasure of listening to the report of the work done by Dr. C. J. Hastings, of Toronto, and speeches from Mr. McGill and Mr. Rutherford. Two items stand out prominently in connection with this meeting, namely, the desire for an official journal for the Association, and Dominion registration. The former was left in the hands of the Finance Committee to go on with; the latter will be taken up by a special committee which will join hands with Dr. Roddick and the presidents or representatives of the various medical councils. The next annual meeting will be held in Toronto, with Dr. Adam H. Wright, Toronto, as president. Needless to say, this was an exceedingly popular choice.

The resolution *re* Dominion Registration, which was unanimously adopted, reads as follows: "Therefore I (Dr. R. W. Powell) move that this Canadian Medical Association, now in session, urge upon Dr. Roddick the great importance of impressing upon the Government and Parliament of Canada the desirability of so amending the Canada Medical Act of 1902 that when five or more provinces agree to the provisions and pass the necessary legislation to make it effective, the bill may become law, and apply to those provinces which have so legislated. That in order to strengthen Dr. Roddick's hands a committee be formed of representatives from each of the provinces to consult with him on the provisions of the bill and as to the amendments necessary or desirable, and finally that the various colleges of physicians and surgeons or Provincial Licensing Boards in the Dominion be respectfully invited to nominate at least one of their own numbers to serve on such committee.

Canadian Medical Association—Toronto has been selected as the place of meeting of the Canadian Medical Association in 1910, with the following officers: President, Dr. Adam H. Wright, Toronto; General Secretary, Dr. George Elliott, Toronto; Treasurer, Dr. H. B. Small, Ottawa; Vice-Presidents and Local Secretaries, the

presidents and secretaries of the provincial medical societies *ex officio*; Vice-President for the Province of Quebec, Dr. Normand, Three Rivers; Local Secretary for Quebec, Dr. R. P. Campbell, Montreal; Finance Committee, Dr. J. T. Fotheringham, Toronto (Chairman), Dr. F. N. G. Starr, Toronto, Dr. S. J. Tunstall, Vancouver, Dr. Murray MacLaren, St. John, N.B., Dr. James Bell, Montreal, and the President and General Secretary; Chairman of Committee on Medical Legislation, Dr. A. T. Shillington, Ottawa; Chairman of Committee on Medical Education, Dr. R. A. Reeve, Toronto; Chairman of Committee on Hygiene and Public Health, Dr. A. T. Shillington, Ottawa; Chairman of Committee on Amendments to Constitution and By-Laws, Dr. H. B. Small, Ottawa; Chairman of Committee on Reports of Officers, Dr. E. Ryan, Kingston; Chairman of Committee on Necrology, Dr. J. H. Elliott, Toronto; Chairman of Milk Commission, Dr. C. J. Hastings, Toronto.

Dr. R. A. Reeve, Toronto, was elected chairman of the Executive Council, and the following members thereof were in attendance: Elected by the Association—Dr. R. W. Powell, Ottawa; Dr. A. T. Shillington, Ottawa; Dr. Murray MacLaren, St. John, N.B.; Dr. R. A. Reeve, Toronto; Dr. John T. Fotheringham, Toronto; Dr. J. H. Elliott, Toronto; Dr. Chas. J. Hastings, Toronto; Dr. J. C. Mitchell, Brockville, Ont.; Dr. Ingersoll Olmsted, Hamilton; Dr. J. George Adami, Montreal; Dr. Edward Ryan, Kingston; Dr. H. A. MacCallum, London, Ont.; Dr. H. G. McKid, Calgary; Dr. James Bell, Montreal; Dr. R. A. Kennedy, McLeod, Alberta. Representing Nova Scotia Medical Society—Dr. John Stewart and Dr. George M. Campbell, Halifax. Representing the Ontario Medical Association—Dr. D. J. Gibb Wishart and Dr. F. N. G. Starr, Toronto. Representing Manitoba Medical Association, Dr. Harvey Smith (President), Dr. R. S. Thornton, Deloraine, and Dr. S. W. Prowse, Winnipeg. Representing British Columbia Medical Association—Dr. S. J. Tunstall, Vancouver. Special Committee on Medical Inspection of School Children—Dr. John Stewart, Halifax; Dr. Murray MacLaren, St. John, N.B.; Dr. S. J. Tunstall, Vancouver; Dr. R. W. Powell, Ottawa, and Dr. R. J. Blanchard, Winnipeg.

Pellagra is described by Osler as a nutritional disturbance due to the use of altered maize. Up to this last year or so it had not been observed to any extent in the United States, but within that time and at the present it is being observed and studied in different sections of that country. There seems to be no doubt that it prevails to a wider extent than was formerly believed. The condition now recognized as such—authoritatively we are told—has probably existed on this side the Atlantic from 25 to 30 years. In most cases it has likely been regarded as unusual manifestations of tuberculosis, syphilis, malaria, acute delirium, hook-worms, dermatitis exfoliativa, eczema, etc. Dr. E. J. Wood, Wilmington, N.C., claims to have records of three hundred cases which have occurred in the Southern States, seventy-five having been in North Carolina alone. Dr. Walker, of the State Sanitarium at Milledgeville, Ga., says that two per cent. of over 947 admissions in 1908 were cases of pellagra. Recently a letter was addressed to 161 superintendents of state hospitals in the United States, and about twenty of the 120 replies received were in the affirmative. One writer gives as a conservative estimate 1,500 cases in the Southern States since 1906. The South Carolina State Board of Health and the United States Public Health and Marine Hospital Service have been in co-operation in original research during the past year and one-half.

DR. ERNEST JONES, 107 Brunswick Ave., Toronto, consulting physician in nervous diseases, has returned from a two months' trip abroad.

News Items

Dr. W. J. Mayo, Rochester, Minn., was elected an honorary member of the Canadian Medical Association at Winnipeg.

Dr. W. A. YORNG, Toronto, Managing Editor *Canadian Journal of Medicine and Surgery*, has been elected President of the American Medical Editors' Association.

Dr. J. F. SILER, Medical Corps, U. S. Army, and Chief of Dept. of Tropical Medicine in the New York Post-Graduate Medical School, has been sent to Peoria, Ill., to investigate the recent outbreak of pellagra.

ANTIPYRETIC, ANALGESIC AND ANTISEPTIC POWER. In speaking of the treatment of articular rheumatism, Hobart A. Hare, M.D., Professor of Therapeutics in the Jefferson Medical College, and editor of *The Therapeutic Gazette*, says: "Any substance possessing strong antipyretic power must be of value under such circumstances." He further notes that the analgesic power of the coal-tar products "must exert a powerful influence for good." The lowering of the fever, no doubt, quiets the system and removes the delirium which accompanies the hyperpyrexia, while freedom from pain saves an immense amount of wear, and places the patient in a better condition for recovery. The researches of Guttman show conclusively that these products possess a direct anti-rheumatic influence, and among these remedies antikamnia stands pre-eminent as an analgesic and antipyretic. Hare, in his "Practical Therapeutics," says: "Salol renders the intestinal canal antiseptic," a condition absolutely essential in the treatment of rheumatism. In short, the value of salol in rheumatic conditions is so well understood and appreciated that further comment is unnecessary. The statements of Professors Hare and Guttman are so well known and to the point, and have been verified so often, that the uses of "Antikamnia and Salol Tablets" are at once apparent. Each of these tablets contains two and one-half grains of antikamnia and two and one-half grains of salol. The proper proportion of the ingredients is evidenced by the popularity of the tablets in all rheumatic conditions.

Correspondence.

Hagley Gap, P.A., Jamaica,
West Indies, Oct. 15th, 1908.

To the Editor:

Reading a Government pamphlet on Cerebro-Spinal Meningitis, the words "The incubation period is unknown" reminded me that *I* could say that of myself about *most* diseases! So I started to read them up.

Authorities differ so, there's plenty of variety; so I could only make an "average" list, and this I used to memorize while on long horseback rides and "just for fun" worked out a rhymed version. Seems to me it has some mnemonic value; and, just as in the dear old days I'd have shown it to "the fellows" first thing, I presume to send it now in the hope that you *may*—to my great delight—think it worth while giving them.

Yours cordially,

HARRY G. JOHNSTON,

Trinity, '99

"INCUBATION PERIODS."

"Cerebro-Spinal Meningitis—Unknown."	DISEASE.	DAYS.	
		Min.	Max.
One day Anthrax and La Grippe,	Anthrax	1	3
Two for Cholera, Plague and Diph.,	Grippe		4
Dengue, Glanders, Scarlet, Yellow,	Cholera		5
On the third day take a fellow.	Plague (Bubonic)	2	6
	Diphtheria		10
	Dengue		5
	Glanders	3	5
	Scarlet Fever		5
	Yellow Fever		6
Five, Relapsing Fever, Typhus;	Relapsing Fever	5	7
Seven for Smallpox, Tussis, Tetanus;	Typhus Fever		14
Mumps and Measles (two), Varicella,	Smallpox		
Typhoid, Syph.—ten days "Poor teller!"	Portusasis	7	14
	Tetanus		
	Mumps		21
	Measles		14
	Rotheln	10	14
	Varicella		16
	Typhoid		21
	Syphilis		70

Publishers' Department

A SANITARIUM FOR ALCOHOLIC AND DRUG PATIENTS.—Dr. Givens' Sanitarium for nervous and mental diseases at Stamford, Conn., has a separate department for alcoholic and drug patients and the Statute of Connecticut permits such patients to voluntarily commit themselves for a period not exceeding one year. The regular, systematic life under medical supervision is excellent. Write Dr. Givens, Stamford, Conn., for particulars.

THE IMPORTANCE OF NUTRITIVE REPAIR in the treatment of all bodily disorders associated with loss of weight and general vitality, is too patent to need more than passing emphasis. The question of how best to bring about such a desirable result is, however, one that the physician is daily called upon to answer, and upon his ability to "build up" his more or less devitalized patients will largely depend his success in the treatment of chronic affections. Taking, for example, a patient suffering from pulmonary tuberculosis in the incipient or secondary stage, what are the approved measures to adopt to bring about improvement of nutrition and a consequent gain of weight and strength? All phthisio-therapists now agree that the therapeutic trinity of salvation for the tuberculous invalid is composed of: 1. Fresh, pure air, in abundance, both night and day; 2. A properly balanced, ample supply of nutritious food; 3. Plenty of rest, especially during the febrile period. While medication is useless, unless the patient is properly fed, "ventilated" and rested, as above referred to, there is no doubt that intelligent medical treatment, designed to promote nutrition, is indicated in a majority of cases. If the tuberculous patient has been neglected for any length of time, some degree of anemia is almost always present. In such cases, an absolutely bland, non-irritant, readily tolerable and assimilable form of iron, such as exists in Pepto-Mangan (Gude), cannot but be of benefit, by stimulating the formation of erythrocytes and hemoglobin, and

thus augmenting the oxygen-bearing potency of the blood. Metabolic interchange is thus quickened, better absorption and assimilation of food follows, and as a consequence, nutritive repair is encouraged and hastened.

Every year brings advances in the science of medicine and pharmacy, and the physician who was practising twenty-five years ago often wonders how his patients took the nauseating doses then prepared. It has only been a few years since predigested beef and the different peptone products were offered to the medical profession, but in these days of pharmaceutical research one is always looking forward to some new discovery, and it is for this reason of advances and changes that our pharmacopeia is revised every ten years, but the question is often asked: Would it be up-to-date if revised every year? One of the newest scientific products in the pharmaceutical laboratory is Metabolized Cod Liver Oil. This metabolized, or changed, oil is obtained by the action of animal ferments under normal conditions of temperature, and is therefore ready to be taken up by the lymphatics. Dr. A. Jacoby, in his work on Pediatrics, states "that one teaspoonful of cod liver oil will never be replaced by three of any other fat." Then how much more valuable this oil must be when put into form ready for assimilation. Waterbury's Metabolized Cod Liver Oil Compound is advertised in this journal, and samples may be had from the manufacturer.

THE Robert Simpson Company, Toronto, has gotten up for free distribution at the Canadian National Exhibition a souvenir of the completion of the new Simpson building in Toronto, but it is intended to be of general interest as a graphic portrayal of Canada's marvellous development. The Simpson store is the largest steel building for commercial purposes in the British Empire. It is thoroughly modern in all its equipments, constructed on the steel-frame, fire-proof system, and devotes over eleven acres to the display and sale of the world's best general merchandise. It is felt

For COUGHS and
THROAT IRRITATION

PINOCODEINE

“FROSST”

Each fluid drachm contains :—Codeine phosphate $\frac{1}{8}$ gr. combined
with Pinus Strobus, Prunus Virginiana, Sanguinaria
Canadensis, Populus Balsamifera and Chloroform.

As a routine expectorant, it is the same reliable product
that has had the support of the profession
for the past eight years.

**STOPS COUGHING,
ALLAYS IRRITATION,
ASSISTS EXPECTORATION**

Perfectly safe with patients of any age.

For GRADUAL or
SUDDEN HEART FAILURE

Elixir Digitalin Co. “Frosst”

Each fluid drachm contains :—Digitalin 1-100 gr.
Nitroglycerine 1-100 gr. Strychnine 1-50 gr.

The original product that has created the demand for this
energetic stimulant.

CHARLES E. FROSST & CO.
MONTREAL, CANADA

that the development of the Robert Simpson Company typifies the development of Canada as a whole, and the booklet referred to embodies this idea. The artist, Mr. C. W. Jefferys, of Toronto, has won a place as Canada's leading draughtsman. A graduate of the Toronto Art Students' League in 1892, having served an apprenticeship to the Toronto Lithographing Company, he moved to New York and was for many years connected with the Art Department of the *New York Herald*. Later he returned to Toronto and joined the staff of the *Daily Star*. Having tired of routine newspaper work, he now devotes himself to painting and black and white illustration as a free lance. He is also a teacher at the Ontario Art School. His technique as a draughtsman—bold, strong-lined, sure—is the model of many an art student and the envy of many a matured artist. Mr. Jefferys is at the present time Vice-President of the Ontario Society of Artists. Mr. S. H. Howard, who is responsible for the idea of the book and its details, and who contributes the text, has been the manager of the Robert Simpson Company's city advertising for the past nine years. This book will be on free distribution to visitors who apply at the Robert Simpson Company's Exhibit, in the Manufacturers' Building at the Fair.

CHRONIC CYSTITIS WITH ALKALINE URINE.—If the urine is alkaline nothing gives so good results in chronic cystitis as benzoic acid, given in capsules of five grains every three hours, in connection with teaspoonful doses of sanmetto. If an antiseptic is desired give salicylic acid internally in five-grain doses, at intervals of from two to four hours, or if contra-indicated, then use boric acid in powder form ten to twenty grains instead.

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXIII.

TORONTO, OCTOBER, 1909.

No. 4.

Original Articles

THE PATHOLOGY OF GENERAL PARALYSIS.*

BY ERNEST JONES, M.D., M.R.C.P. (LOND.).

Demonstrator of Medicine and Psychiatry, University of Toronto; Pathologist to the Toronto Hospital for the Insane.

Out of the vast subject of the pathology of general paralysis I propose to bring before your notice a few of the points that are of most general interest to the clinician, and that aid him both in clarifying his conception of the disease and in making an early and exact diagnosis of it. From the point of view of pathology the disease is in several respects one of peculiar interest, to the psychiatrist, to the practitioner, and to the state. Of all mental diseases it is at the same time the most preventable and the least curable. Its occurrence could, if thought desirable, be avoided either by the individual or by the state. On the other hand, having once occurred it is absolutely refractory to treatment and leads to a fatal issue more rapidly and surely than almost any other form of insanity. This latter fact renders the early diagnosis of it a matter of high importance, not only for the reputation of the physician in attendance, but also for the welfare of the patient's relatives and friends. Again, there are few nervous diseases and no mental diseases the pathology of which is better understood than that of general paralysis. The very fact that it has a specific anatomical substratum is in itself of great theoretic interest, and lends a striking and unfortunate support to the erroneous dogma that insanity is always due to disease of the brain. This dogma happens to be true in the particular affection of general paralysis, but in my opinion it would be most mislead-

*Read at the Winnipeg meeting of the Canadian Medical Association, August, 1909.

ing to generalise it by applying it to all other forms of mental disorder. The existence of an anatomical substratum is important in two other respects. Through it general paralysis constitutes the main bridge connecting the sphere of psychiatry to that of general medicine, and to it we largely owe the renewed earnestness with which the study of psychiatry has been undertaken in the past quarter of a century. Further, the existence of a sharply defined anatomical picture has enabled us to check our clinical diagnoses of the disease in a way that was previously impossible. This has been of the utmost value, not only in clearly differentiating general paralysis from the various so-called forms of pseudo-paralysis, but in its educating effect clinically. There is no more salutary exercise for the clinical psychiatrist than to compare a series of his clinical diagnosis of general paralysis with the results of the microscopic examination of the same cases after death; whoever has not made this experiment would be surprised did he do so at the chastening effect it would have on his opinion of his clinical capacities.

As the *anatomical findings* are thus even for clinical purposes alone of great importance, I will begin by giving a brief account of some of their most salient features. Outside the nervous system one finds, apart from definitely syphilitic lesions, atheroma of the aorta and atrophy of the heart, liver and kidney in a third of the cases. Little need be said of the changes in the nervous system except those in the cerebral cortex. In the peripheral nerves may be seen evidences of parenchymatous degeneration with some overgrowth of connective tissue, and, in the case of the optic nerve, of glia tissue. Neuro-retinitis is frequent, the retinal changes being of the same nature as the cortical ones. In nearly a half of the cases the membranes of the spinal cord are thickened and adherent, and there is visible shrinking of the posterior and lateral columns. In almost every case there is microscopic evidence of degeneration in the cord tracts, usually in both the pyramidal tract and the posterior ascending tracts; the latter changes are the more frequent of the two and are similar in nature, though not in degree, to those present in *tabes dorsalis*.

The *macroscopic changes* found on opening the cranial cavity are thickening and adherence of the dura mater, especially along the middle line and anteriorly, the well-known "false membrane" between the dura and pia, with sometimes a hæmatoma in it, a tough, thick and adherent pia, which tears the cortex when an attempt is made to strip it, and an excess of turbid cerebro-spinal fluid, both on the surface and in the ventricles. The brain is

atrophied, especially in the frontal region, where also the pia changes are most pronounced. The cortex is thin, opaque, hard and injected. The white matter is irregularly injected, and may shew patches of softening.

The *microscopic changes* may be divided into those that can be studied under the low power magnification and those that need a high one. They are all most marked in the frontal and Rolandic regions. Under the low power the most striking feature is the remarkable disorderly arrangement of the cortical nerve cells. The normal division into different layers is here disturbed to a degree found in no other disease. The atrophy and disappearance of considerable numbers of nerve cells, sometimes of whole layers, also at once attracts the attention. An extraordinary number of blood-vessels are noticed, there being evidently present a great proliferation of them. With appropriate methods of staining can also be made out the disappearance of myelin-sheaths, which proceeds to a higher degree and in a more widespread manner than in any other disease, the secondary degeneration of nerve fibres, and the extensive overgrowth of glia tissue. The glia increase takes place especially in the superficial layers of the cortex and along the vessel sheaths. The pial changes will be presently indicated.

Under the high power these processes can be studied in greater detail. The thickening of the *pia* is seen to be due, not to hyperplastic changes, as in alcoholic, senile and arterio-sclerotic conditions, but to an enormous cellular infiltration. This infiltration differs from that which occurs in tertiary syphilitic lesions in being very diffuse and not distributed in foci or following the lines of the nerves and blood vessels, and in being exceedingly heterogeneous. Whereas in tertiary lues it is made up almost entirely of lymphocytes, in general paralysis it comprises all kinds of cells. Plasma cells of all ages may be seen, mast cells, lymphocytes, etc. The pial changes in lues are primary to the cerebral ones, and the two can be closely correlated; this is not the case in general paralysis.

The changes in the *nerve cells* are very pronounced, but are not peculiar to this disease. Almost all kinds of degeneration may be seen, such as fuscous changes, vacuolation, tigrolysis, sclerosis, chromatolysis, as well as complete atrophy. In tertiary lues many swollen cells may be seen, but they do not disappear as a result of atrophy in the way they do in general paralysis. The degeneration of the nerve fibres has already been mentioned. It is greatest in the association tangential fibres of the cortex, but is also marked in the efferent projection fibres. In the senile psychoses degen-

eration of the myelin sheath occurs but there is no secondary degeneration of the axis cylinders, as in general paralysis.

The *glia* overgrowth is very diffuse. Characteristic is the presence of giant spider cells, and a rich formation of thick fibres which are attached in bundles to the blood-vessels. One never sees the plaques of fine unicellular fibres so characteristic of the senile psychoses.

The changes in the *blood-vessels* are of the greatest importance in making a differential diagnosis. The extensive new formation of vessels, which was previously referred to, takes place mainly by a process of budding from the walls of the old ones. It is found also in tertiary lues, and to a less extent in arterio-sclerosis, though in the latter case not apart from focal lesions, such as hæmorrhages. There is a great overgrowth of the intima with proliferation of the endothelial cells. The thickened intima later becomes canalised, so that it may be impossible to determine which was the original lumen. The elastic tissue fibres are thickened and increased in number, changes that occur also in tertiary lues. The adventitial cells proliferate but do not reach the large size often seen in cases of lues. The adventitial lymph-spaces are enormously dilated, and are distended by a rich cellular infiltration. The chief constituents of this infiltration are plasma cells, lymphocytes and mast cells. Degenerative changes, which are mainly hyaline, are slight. They are found mostly in the small vessels near the surface, and chiefly occur towards the end of the disease. This contrasts with the advanced retrogressive changes found in arterio-sclerosis and to a less extent in the alcoholic and senile psychoses. Retrogressive changes are also more pronounced in luetic arteritis than in general paralysis, and in that condition the artery often reverts to the embryonal state so that the three coats can no longer be distinguished. Further the wall of the vessel in luetic endarteritis is not infiltrated with cells as it is in general paralysis, and in luetic meningo-encephalitis the infiltration of the vessel is only secondary to that of the pia.

A few words may be added concerning the cells that are most characteristic of the disease. The plasma cell, which is probably derived from the lymphocyte, is a fairly large cell with a thick nuclear membrane and metachromatic protoplasm, which gets lighter as the cell ages. Around the nucleus the protoplasm is lighter than at the periphery and is often tinted yellow. The cell frequently shews degeneration and vacuolation. Mitosis is rarely seen except in the pia. The cell is usually confined to the adventitial lymph space, and extends beyond this only in parts near

an adherent pia or where there is intense infiltration. The same remark applies to the distribution of the lymphocytes, but this differs in occurring more frequently in the wall of the large vessels, not, as plasma cells do, in that of the small ones. The mast cells are spherical or ovoid cells with coarse, basophile granules and a large oval eccentrically situate nucleus, which is badly marked off from the surrounding protoplasm. They always occur discretely. Very characteristic are the rod-shaped or "Stäbchen" cells, which probably take their origin from the connective tissue cells of the adventitia. These are long cells with branching protoplasm, which frequently contains fat and pigment. The nucleus is often broken and shrunken. They lie attached to the outer surface of the adventitial wall of new blood-vessels. They are occasionally seen in other diseases, particularly tertiary syphilis, when there is much new formation of vessels, but only in focal lesions. Even then they are short and atypical. In general paralysis they are exceedingly frequent and the distinguishing characteristics of the cell are evident to a degree never found in any other disease.

The anatomical picture, the outline of which I have here sketched, is perfectly distinctive of general paralysis, and by means of the post-mortem examination alone a trained observer can without hesitation decide whether a given patient had or had not suffered from this disease. The obvious importance of this fact, both to theory and to practice, need not be further insisted on.

We may next consider some of the pathological observations that may be made during the life of the patient. These are of great interest not only as throwing much light on the pathogenesis of the disease but also in that they enable us to make a certain diagnosis of its presence even in the earliest stages. Many of them, such as the hæmic leucocytosis, which is so common, particularly after the seizures, are of no great diagnostic value, and I shall confine my remarks to the subject of the *cerebro-spinal fluid*. The technique of lumbar puncture is so well known that I will only offer a word or two concerning a few personal preferences which a considerable experience has dictated. The interval between the fourth and fifth lumbar spines is the most convenient one. The sitting posture is the most advisable, but one must see to it that the patient lies down immediately after the operation and for the rest of the day. The amount of fluid withdrawn should never exceed ten c.c. at the most. The operation should never be performed if there is reason to suspect the presence of a tumour of the brain.

A great number of physical and chemical properties of the fluid may be investigated, but in routine practice it is only necessary to study three features, the pressure, the proteid content and the cells present. The *pressure* is almost constantly raised in cases of general paralysis, frequently to four times the normal. The *proteid content* is always increased. The simplest way of determining this is by means of the ordinary Heller nitric acid test, applied as in urine testing. The extent of the increase can be fairly well gauged by the density of the ring formed at the junction of the two liquids, or by the time necessary for the formation of it when the fluid is diluted. The fact that this increase in the proteid content of the cerebro-spinal fluid is a constant feature in general paralysis was first demonstrated by Babcock of New York in 1896, though it was not until the publications of several French workers in 1903 that general attention was called to it. The proteid in normal cerebro-spinal fluid is probably globulin only, and it does not exceed half a gramme per litre. In general paralysis the amount is frequently four times this, and the proteid consists of both globulin and albumin, rather more of the former than of the latter. A matter of special theoretic interest is that the globulin is of a special kind, one of the varieties of euglobulin, and it has recently been shown that it is this euglobulin which carries the peculiar Wassermann anti-body of which we shall speak in a moment. Many methods have been employed for demonstrating this increase in euglobulin, but I will mention only the two which in my opinion are of the most service for this purpose. These were first described a few months ago, one by Noguchi, of New York, and the other by G. W. Ross, of Toronto, and myself.* The former consists in adding half a c.c. of a 10 per cent. solution of butyric acid in normal salt solution to a fifth of a c.c. of the cerebro-spinal fluid, raising the mixture to boiling point, further adding a fifth of a c.c. of a 4 per cent. sodium hydrate solution, and again heating. Within a few minutes, if the reaction is positive, a coarse flocculent precipitate forms. The second test consists in gently pouring a little of the cerebro-spinal fluid on to a saturated solution of normal ammonium sulphate. When the reaction is positive a fine greyish-white ring appears at the junction of the two liquids.

In the normal cerebro-spinal fluid only three or four *cells* are found in a cubic millimetre and these are exclusively lymphocytes. In general paralysis, on the other hand, there are commonly present forty or fifty cells to the cubic millimetre, and it is

* See *British Medical Journal*, May 8, 1909.

not rare to find several hundred. This cell increase occurs at the very outset of the disease, a fact of obvious importance for diagnostic purposes. Although the majority of the cells are lymphocytes, usually about two-thirds, still a great variety of other cells are also found, particularly endothelial cells, plasma cells, phagocytes and polymorphonuclear leucocytes. The increase is most marked in cases that run an acute course, and is greater, especially as regards the polymorphonuclear leucocytes, during the seizures that occur in the disease.

The three features just mentioned, the increase in pressure, in the globulin content and in number of lymphocytes present, are simple observations which can be made by any physician and which in the majority of cases enable us to make a positive diagnosis of the disease.

I have now to speak of a far more complicated test, which has of late aroused widespread interest, the well known *Wassermann sero-diagnostic reaction*. The credit for the laborious work done on this subject belongs as exclusively to the German school of psychiatry as that done on the simpler observations above mentioned belongs to the French school. The amount of research that has been carried out on the Wassermann reaction may be indicated by the fact that within the past couple of years nearly three hundred papers, many of which are of the highest excellence, have appeared, incorporating conclusions drawn from the examination of several thousand cases.* The essential point of Wassermann's discovery was that the serum of a syphilitic, when mixed with an infusion made from syphilitic material, has the power of binding the "complement" present in normal blood serum. Complement is the substance which acts on various foreign substances, called "antigens," when in the presence of the corresponding "anti-bodies." For instance, normal complement-containing blood serum will dissolve the red blood cells of another animal provided that an anti-body corresponding to those red blood cells is present. This anti-body has to be obtained by previously injecting the red blood cells of the second animal into the circulation of the first, this animal responding to the injection by pouring out anti-body into its blood stream. It is important to remember that the complement is a non-specific substance which can, therefore, act on a very large number of different foreign substances, or antigens, while the anti-body is a specific substance which can enable the

* Those who wish to pursue the subject may be referred to a detailed review of it I have recently published in the *American Journal of Insanity*, April, 1909. A paper on the "Proteid Content of the Cerebro-spinal Fluid in General Paralysis," published in the *Review of Neurology and Psychiatry*, June, 1909, may also be mentioned.

complement to act only on the corresponding antigen in response to which it was formed. We can thus test whether the complement of a blood serum is bound or not by ascertaining whether it is or is not free to take part in a subsequent reaction. In the test in question, for instance, if the mixture of syphilitic material, which in this case constitutes the antigen, and the blood serum have bound the complement, then this is no longer free to dissolve any red blood corpuscles subsequently added, in spite of the presence of the specific anti-body for these corpuscles. The test is carried out as follows: An emulsion of the syphilitic liver of a fetus is made and a fifth of a c.c. is added to an equal quantity of the fluid to be tested, together with a tenth of a c.c. of the complement-containing blood serum of a normal guinea-pig. The mixture is incubated for an hour or two, and is then added to a c.c. of a 5 per cent. saline emulsion of sheep's red blood corpuscles and to twice the amount of anti-body necessary to dissolve these corpuscles; this anti-body is obtained by taking the serum of a rabbit which has some time previously been twice injected with sheep's corpuscles. If the reaction is negative then the guinea-pig complement, not being bound, is free to dissolve the red corpuscles; if the reaction is positive it cannot. A positive reaction, therefore, indicates that some substance, which we may provisionally term a syphilitic anti-body, was present in the fluid that was being tested, and bound the complement to the syphilitic antigen. Each of the five constituents of the reaction has independently to be tested by control reactions, and there are a large number of possible fallacies which I need not here enumerate. It will at once be evident that only a highly skilled expert can perform the test with any hope of securing adequate accuracy of results, and although several simplifications have recently been suggested it is very doubtful whether any modification of the original technique is satisfactory.

The clinical results are very striking and have been so widely confirmed as to be no longer open to doubt. They may summarily be stated in a sentence. The reaction is invariably positive with the blood serum of patients suffering from general paralysis, and almost always with the cerebro-spinal fluid; it is commonly positive with the blood serum of patients suffering from syphilis only, but only rarely with the cerebro-spinal fluid, even if the nervous system is implicated in the disease.

Wassermann's interpretation of the reaction has of late been discredited. It was simply that these peculiar substances found in the serum and fluid were specific syphilitic anti-bodies. It has

been shewn, however, that the reaction can be obtained, though not so surely, if the syphilitic emulsion used in it is replaced by any one of a large number of other substances. The essential constituent in this antigen is of a lipid nature and is closely allied to lecithin. The substance in the serum or fluid, the so-called antibody, is contained, as was mentioned above, in the euglobulin. It is present in small quantities in the normal, but is greatly increased in amount in syphilis and meta-syphilis. A great number of facts have been established concerning its physical and chemical properties, but nothing is definitely known of the origin or essential significance of it. Our present knowledge concerning the pathology of the reaction may be summed up as follows: Various antigens of a lipid nature, which are present in especially large quantities in syphilitic organs, interact, probably as a colloid precipitation phenomenon, with some substance which is contained in euglobulin: the combination has the power of combining with complement, and thus inhibiting hæmolysis.

If we now withdraw from these confusing details and with a broader perspective attempt to review them in their relation to the classical conceptions of general paralysis, we must at once be struck by the remarkable confirmation two of the most important of these conceptions thus receive. I refer to the specificity of the disease, and to the close dependence of it on syphilis. General paralysis is in every sense of the word a *specific* disease. Even in the purely clinical side this has long been suspected. A disease which produces such an extraordinarily delicate lesion as that underlying the Argyll-Robertson pupil, a lesion so fine as to have escaped detection by the most exact methods of investigation, we must suppose to be due to some one constant agent, such as a complex toxin. This surmise reaches almost certainty when we recall the highly peculiar histological picture I have above sketched, and further the exceedingly characteristic changes in the cerebro-spinal fluid. It is unthinkable that such an elaborate and peculiar clinico-pathological picture should be produced by banal causes, such as sun-stroke, trauma, worry, alcohol, etc., as is still frequently alleged. And when we search for the specific morbid agent that must be the cause of this elaborate picture our efforts are singularly rewarded. All the evidence, drawn from the most diverse sources, converges with fatal convincingness towards the one and only specific factor in the production of general paralysis, namely syphilis. The amazing corresponding between the distribution of syphilis and that of general paralysis, in different countries, in different towns, in the different social classes and occupations,

and between the age and sex incidence of the two diseases; the study of the inherited and conjugal cases; the incidence of syphilis in paralytics, as revealed not only by the history but by the physical signs, post-mortem evidences, difficulty of inoculating the patients with syphilis, and the constant presence of the Wassermann syphilitic substances; the frequency with which patients with syphilis later develop general paralysis; all these considerations are in the fullest harmony with the pathological evidences I have above detailed, which demonstrate the essential relationship of general paralysis to syphilis. The subject, therefore, once more affords an illustration of the immediate practical value for clinical and preventive medicine of researches which, when viewed in too one-sided a way, appear to be abstract, dry and fruitless, and the results thus obtained should serve as an active stimulus to further and more profound investigations in these and allied realms of study.

REPORT OF A CASE OF LAPAROTOMY FOR TUBERCULOUS PERITONITIS AND SUPRAPUBIC PROSTATECTOMY THREE AND A HALF YEARS LATER, WITH EXHIBITION OF PATIENT.

By FREDERICK WILLIAM MARLOW, M.D., F.R.C.S.,

Senior Assistant Surgeon, Gynecological Department, Toronto General Hospital.

J. S., Toronto, widower, aged 68 years, referred by Dr. Joachim Guinane, was admitted to St. Michael's Hospital on March 4, 1905. Until three weeks previous to that time he had been steadily engaged at his occupation as fireman at the General Post Office, and was practically well except for some recent loss of weight and what he described as "heart-burn," relievable by soda, with eructations of gas. He was inclined to be constipated, though on one occasion, one and a half years previously, he had severe diarrhea. When he became ill he noticed a small swelling at the umbilicus, which gradually enlarged to about three-quarters of an inch in diameter, was tender, inflamed and bluish in appearance. Following this the abdomen gradually enlarged, though there was but little general tenderness or pain. His appetite failed; he was slightly feverish towards evening, but did not suffer from chills or sweats. There was no nausea or vomiting, and the bowels were somewhat constipated. His family history was good, there being

nothing in it having any bearing on the case. Personally he was a man of temperate habits, living in good surroundings, and had for the last four years refrained from smoking, a pastime in which he had indulged for a period of fifty years. For two years he had observed a gradually increasing frequency of micturition and a diminution in the size and force of the urinary stream.

Examination on March 5 revealed a markedly distended abdomen, dull in the flanks, and with slight muscular rigidity, but very little diffuse tenderness. At the umbilicus there was a dusky, tender swelling, unaffected by coughing or manipulation, which was considered to be an inflamed, irreducible omental hernia.

The pulse was about 100, the morning temperature 98 to 99 deg., and the evening temperature 100 to 101 deg. General examination did not reveal any other abnormal condition except palpable enlargement of the prostate gland. The urine was practically normal and the condition of his arteries very fair.

The diagnosis was serous peritonitis, and though it seemed likely to be tuberculous, its exact nature was obscured by the features of the umbilical swelling.

Laparotomy was advised, and was performed on March 7.

The abdomen was opened by an incision in the middle line, the umbilical hernia being surrounded by it.

A large quantity of clear straw-colored fluid was contained, and all the peritoneal surfaces, parietal and visceral, were studded thickly with miliary tubercles.

The omentum was rolled up behind the umbilicus and was filled with tubercles, and the small part of it herniated at the umbilicus was in a similar condition. This latter was removed for examination. The intestinal coils were slightly adherent, but readily separable. No other pathological condition was observed.

After flushing the abdomen with normal saline the wound was closed with silkworm gut, the umbilicus having been removed. The operation was well borne.

Primary healing occurred, but a few days after the removal of the stitches a small part opened up superficially and assumed the appearance of a tuberculized ulcer. Healing of this took place in two weeks under iodoform applications.

The general condition improved, the temperature and pulse remaining normal after three weeks. There was no return of fluid and the abdomen remained quite flat and flaccid.

The patient was discharged much improved after two months' stay in the hospital, and shortly afterwards resumed his work.

Dr. Silverthorne reported that the omental specimen examined was typically tubercular and miliary in character, the speci-

men being known as No. 10-3-05-1 in the Department of Pathology, Toronto University.

The nature of the umbilical swelling and of its contents indicated the pre-existence of a small, unnoticed omental hernia, and that the tuberculous infection of the contained omentum caused it to assume the features revealed at the time of examination.

Other interesting features were the advanced age of the patient, the rapid onset, the widespread involvement of the peritoneum and the very satisfactory recovery following the operation. Seen on April 10, 1906, he was feeling perfectly well, except for the urinary disorder, which was a little worse than at the time of the operation over a year previously. He had gained much weight and was at work every day. The temperature and pulse were normal. The abdominal wall was thick with fat, and the flanks were perfectly resonant. The scar was slightly weak at the seat of the tuberculized ulcer, allowing slight prominence, which, however, was quite small and not troublesome.

On October 18, 1908, he consulted me with regard to his urinary condition, which had become much worse and was making his life so miserable that he had determined to have some operative treatment. It may here be noted that his age was seventy-one, and that the increased frequency of micturition had been observed for five years. Lately he would pass urine as often as twenty-five times a day, the frequency being greater at night than during the daytime. He suffered much from loss of sleep, though his general condition was still fairly good. Examination per rectum showed considerable enlargement of the prostate gland, and more particularly of the right side. After he urinated a No. 6 gum elastic catheter was passed with some deep difficulty and about an ounce of residual urine was withdrawn. This comparatively small quantity, its almost normal characters, though faintly alkaline, and the large size of the right side of the prostate, seemed to indicate lateral encroachment upon the urethra. Operation was discussed and decided upon because of the almost entire absence of cystitis, the fair general condition of the patient, and his great anxiety for relief at any risk.

On October 20 he was admitted to the Toronto General Hospital, and was given ten grains of urotropine every four hours and much water to drink. On October 22, assisted by Drs. Mac-Millan and Tyndall, the house surgeons, and with Dr. Kinnear giving the anæsthetic, I performed suprapubic prostatectomy.

Only a few details of the operation need be mentioned here. After incising the bladder an attempt to tear through the part of the wall covering the projecting prostate while this was sup-

ported from the rectum was unsuccessful on account of the difficulty of fixing the gland and the lack of sufficient density of the operator's finger-nail. Assistance from the rectum was dispensed with, the glove removed, and then a tenaculum was placed on the projecting mass. By this it was pulled up and steadied for further manipulations and the operation was greatly facilitated. With scissors the wall was carefully incised over the right lobe to an extent sufficient to admit the tip of the finger. Then with the finger the proper plain of separation was soon discovered and the enucleation proceeded with but little difficulty. To assist in the separation of the left and lower part the tenaculum was removed to the free right part of the gland. The gland was removed entire, the prostatic urethra being included.

After removal the cavity was rapidly washed with hot normal saline, then mopped out until nearly dry and packed firmly with plaited iodoform gauze strip, the end of which was carried through the drainage tube, which was of a calibre exceeding half an inch and projected into the bladder about two inches, and was held in position by a purse-string suture of catgut around the opening into the bladder and by silk-worm gut sutures fastening it to the skin on either side. After suturing the wound above and below the tube with silkworm gut and inserting narrow iodoform gauze around the tube in the subcutaneous area, the projecting portion of the tube was slit into four pieces to within half an inch of the abdominal wall and the dressings put on without any arrangement for carrying the discharges away from them.

The patient stood the operation well, and shortly after becoming conscious was given water to drink as freely as possible, and urotropine, grs. 10, every four hours. Drinking much water was insisted on for many days after.

Recovery was practically uninterrupted, though on the ninth day a left-sided orchitis developed. This, though mild, gave the patient considerable discomfort for about a week.

The after treatment was very simple. The pads were changed as frequently as required. The gauze was removed through the tube in portions on the first, second and third days, and after its entire removal on the third day irrigation with boracic solution was performed through the tube. The gauze around the tube was also removed on the third day. Irrigation through the tube was repeated on the fourth and fifth days, and on the fifth day the tube was removed. After this daily irrigation was performed through the opening until the nineteenth day, when this was getting small, washing per urethram with a soft rubber catheter, which could

be passed easily, was begun. On the twentieth day some urine came from the urethra, and the amount increased daily until on the twenty-seventh day urination per urethram was quite voluntary and the amount draining away from the wound was very small. On the thirty-fifth day all the urine was passing per urethram at intervals of three or four hours. The urine was acid and otherwise normal. There was no cystitis, and the irrigations were stopped.

He was discharged on December 1, forty days after operation, being able to urinate as easily as when a child (to use his own expression). Healing of the wound was quite complete a few days later. During convalescence he was allowed to sit up after the second day.

On December 20, within two months after operation, he resumed his work as fireman at the Post Office, where he works eight hours a day for seven days each week.

Present examination shows him to be perfectly well, his general condition good, and his statements as to the relief experienced and the return to a normal condition are most gratifying and reassuring.

Examination of the prostate showed that the obstruction was chiefly due to enlargement of the right side encroaching upon the urethra. There was a small but unimportant so-called middle lobe. Its projection was insufficient to influence the act of micturition materially. The enlargement was of a fibro-adenomatous type, and from the pathological report, No. 1205, Toronto General Hospital, there was no evidence of tuberculosis.

No very special interest can be claimed for much of this case report, but a glimpse at the man in his present condition is an inspiration and a guarantee that the end has justified the means.

417 Bloor St. W., Toronto Jan. 19, 1909.

PRIMARY CARCINOMA OF THE NECK.

BY F. ARNOLD CLARKSON, M.B.,

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Primary cancer of the deep tissues of the neck, or, as it was named by Volkman, branchiogenic carcinoma, is so rare that every case of it is interesting enough to report. A comparatively large number of primary malignant tumors in the upper part of the neck have been observed, it is true, and have been called carcinoma, but recent investigation has shown that many of them were peritheliomata originating in the carotid gland. Secondary carcinoma of the neck is, of course, seen very often, and there is always the chance that what is considered a primary growth is in reality only a secondary development from a very small carcinoma in some obscure location where it escapes the observation of the clinician and even of the pathologist.

The following history is a fair type of the few cases which have been reported:

Mrs. F., a nulliparous woman, aged 60, sought medical advice on December 29, 1905, for a rapidly growing tumor on the right side of her neck, which she had first observed about six weeks previously. The swelling had reached such a size that she had great difficulty in swallowing, and this was the unpleasant symptom which brought her reluctantly to a physician.

She was an undersized, badly nourished Englishwoman, with a most pronounced scoliosis, the rotation being to the right. Previously in very comfortable circumstances, she had been by bad investments reduced to abject poverty. The family history had little of interest, except that her mother was insane. The general appearance of the patient indicated a recent loss of flesh.

The tumor, situated in the anterior triangle of the neck, was, on the first examination, of stony hardness, $2\frac{1}{2}$ in. vertically and 2 in. from side to side. It was freely movable, and unattached to the skin. At the lower pole was a small nodule, evidently connected with the larger growth. Any handling of the tissues caused a good deal of pain, but otherwise the patient suffered little discomfort.

The pharynx, larynx, esophagus and nose were carefully examined for a carcinomatous lesion, but none was found.

The tumor increased rapidly in size, the concatenate glands enlarged, the cachexia and weakness became more pronounced, till

death ensued on May 6, 1906, about five months after the initial symptoms. About the middle of March the largest mass became soft and fluctuating, ruptured, and discharged a small quantity of debris.

The autopsy, kindly performed in my absence from the city by the house surgeon, Dr. E. A. Hardy, revealed a number of enlarged lymphatic glands on the right side of the neck, extending downwards from the original growth, which was capsulated and only slightly attached to the surrounding tissues. The interior of the tumor was filled with necrotic material. Although the tongue, esophagus and air passages were carefully examined, no other neoplasm was discovered.

Microscopical Examination.—Sections from the primary growth showed a large number of epithelial cells, closely packed together, with very little stroma. The sections from the lymphatic glands contained carcinoma cells in alveoli. The microscopical diagnosis was epithelioma.

Etiology.—Early in the development of the embryo, the visceral clefts became closed, and as far as can be seen from the surface, completely disappear. The first, second and third clefts are, apparently, completely obliterated in the adult, but it is supposed that, during the process, in some cases at least, part of the surface epithelium is folded in, and from this, at a later period of life, the neoplasm begins, occupying the situation generally conceded to be that of the second branchiogenic cleft.

Occurrence.—All the cases I can find reported were in men of middle age. This patient was a woman. The right side seems to be more frequently involved.

Course.—The tumor develops slowly and insidiously at first, the patient's attention being attracted to it only when it is large enough to cause pain. After this the growth of the tumor is rapid and the patient dies in a few months. I can find only one record of cure by surgical intervention.

Diagnosis. The condition must be distinguished from a secondary cancer, where the primary focus is concealed. Barnard (Polyclinie, 1904) reported a case of malignant glands due to an epithelioma of the pharynx so small as to escape detection during life. There is always the possibility of a primary neoplasm in the nose, larynx or esophagus. Tuberculosis also must be taken into consideration. Even when the tumor is removed, the cheesy debris of the interior is hard to distinguish from a caseating gland.

The prognosis is hopeless, probably because the condition is recognized too late.

Medicine

GRAHAM CHAMBERS, R. J. DWYER, GOLDWIN HOWLAND, GEO. W. ROSS, WM. D. YOUNG.

The Function of the So-Called Motor Area of the Brain. SIR VICTOR HORSLEY (*B. M. J.*, July 17th).

The Linaere lecture is of the greatest importance, since Horsley brings fresh proof to bear on his view, that the precentral gyrus is both motor and sensory in function, and also because he proves recovery of power after excision of the motor area.

After reviewing the views of prominent investigators on the function of the motor area, he asserts his belief that the large pyramidal cells are motor, and the smaller types of cells as being sensory, associative, and receptive cells. He follows Bastian's views of the so-called areas being kinesthetic centres, that is, both motor and sensory in function.

The sensory centres present in these areas will be those which are accurately related to the direct evolution of a movement.

The new evidence Horsley provides is based on the case of a man who had his entire "arm" area excised for a spasmodic affection, the operation including careful selection of the whole area by electrical stimulation.

The gyrus so removed showed celluloid and structural defect, while clinically the spasmodic movements were entirely stopped and the arm became quite placid and powerless.

The effects of excision of the gyrus precentralis, or arm area, may be stated as follows:

- (a) *Immediate*
 - (1) Disappearance of spasmodic movements.
 - (2) Loss of voluntary power.
 - (3) Moderate anaesthesia.
 - (4) Astereognosis.
 - (5) Postaxial and proximal atopognosis.
- (b) *1 year later*
 - (1) No spasmodic movements.
 - (2) Partial recovery of voluntary power.
 - (3) Proximal atopognosis of left postaxial fingers.
 - (4) Astereognosis.
 - (5) Slight anaesthesia on ulnar side of hand.

Considering briefly these important data:

(1) *Motion*.—After operation no power was present, but in 14 days, consensual power returned, that is, overaction of the healthy arm was accompanied by movement of the paralyzed arm.

Again, after three weeks, power in the shoulder returned, followed later by the elbow and wrist. Now, a year later, some degree of extension is possible in the fingers, greatest in the thumb and least in the little finger; while the flexion of the fingers is followed by *athetoid* movements of the hand.

(2) *Sensation*. For a few days the limb felt numb, and then a general sense of its position was acquired. The heat sense was defective for a time on hand and fingers. Touch was slightly diminished in an increasing ratio towards hand, and pain showed a parallel condition. *Stereognosis* (*i.e.*, the power to recognize the size of objects) was totally lost and is still defective. *Atopognosis* (*i.e.*, the loss of power to localize correctly the point touched or pricked) was present, being both *proximal* and *axial*.

The Gyrus Precentralis possesses, then, these functions: (1) Movement; (2) Taclility (slight); (3) Topognosis; (4) Pain (slight); (5) Stereognosis (6) Arthritic sense; (7) Muscular sense. But it has not a sole possession of these functions; other convolutions contain them to a varying degree.

Voluntary power is not absolutely dependent on Betz cells, and can be performed after removal of motor area.

G W. H.

Obstetrics

CHAS. J. C. O. HASTINGS, ARTHUR C. HENDRICK.

The Role of the Perineal Body during Labor, and the Conduction of Delivery in Relation Thereto. By R. H. PARAMORE, F.R.C.S. *The Lancet*, July, 1909.

The perineal body is described as a collection of tissues wedge-shaped in sagittal section, situated between the extra-pelvic portion of the vagina and the anal canal. On account of its situation and structure it would seem to be of small account in supporting the pelvic viscera.

The writer states that during childbirth the perineal body may even act in a harmful manner. Thus, during labor the fetal head, which passes through the pelvic cavity flexed and impinges on the pelvic floor in the same attitude, is extruded from the body by a movement of extension. This mechanism is divided into two periods: (1) in which primary extension occurs, caused by the resistance of the pelvic floor; and (2) in which *secondary* or continued extension occurs, caused by the resistance of the perineal tissues.

On account of the extension caused by the resistance of the perineal body, the levator ani muscle (pubo-rectalis portion) which surrounds the outlet, instead of embracing a circle of the fetal head, finds itself applied to an ellipse, and hence the muscle is correspondingly increased in length, and so a greater stretching. But if the vulvar aperture be destroyed by a laceration the secondary extension of the head does not occur, and so an oblique diameter does not occupy the pelvic floor aperture, and this, therefore, escapes a greater distension.

There seems little doubt that the perineal body does play a part in childbirth to the detriment of the pubo-rectalis muscle (levator ani) and that a laceration of its tissues by permitting birth with the least possible distension of the pelvic floor apertures may in many cases prevent possible rupture of the levator ani muscle (pubo-rectalis).

If during delivery these perineal injuries are prevented, or endeavor is made to prevent them, either by opposing the advance of the fetal head, and thus allowing time for stretching, or actually supporting the perineum, no good is achieved other than a preser-

vation of the perineal tissues, but much harm may accrue to the levator ani muscle (pubo-rectalis) from such manoeuvres. (I am sure this is the experience of many, that although the skin perineum may be preserved, on putting the finger into the vagina one often finds the pubo-rectalis muscle torn through almost to the rectum in some cases.) Hence, perineal tears occurring early are often a blessing in disguise, as they prevent the secondary extension referred to above. Hence the usual method of preserving the perineum would seem to be faulty in design.

For example, tears are of no significance so far as preventing prolapse is concerned, and the only reason for immediate repair is (1) to check hemorrhage and (2) to prevent infection of the wound and subsequently the vagina.

If the facts recited above be true, what is the best method to adopt during delivery?

It is obvious that attempts should be made to prevent secondary or continued extension of the head. This is best done by Toff's method, which is as follows: When the anterior extremity of the head appears at the vulva and begins to distend it, two or more fingers should be placed between it and the symphysis pubis and traction exerted backwards. This is done especially during the pains. The tendency of the head to extend is overcome. Simultaneously pressure may be applied above and behind the anus, which manoeuvre tends to prevent extension and also assists in the expulsion of the head.

This method of delivery of the head the writer has employed many times with success.

A. C. H.

Mechanism and Treatment of Placenta Previa. By HENRY SCHWARZ, M.D. *University Bulletin*, February, 1909.

Placenta Previa is stated to follow frequent child-bearing, the predisposition increasing with the number of pregnancies through which the woman has passed.

The majority of cases of recognized placenta previa cause no symptoms until the second half of pregnancy is reached. At this time the uterine contractions, increasing in frequency and force, cause the internal os to open up, so that the examining finger may feel the membranes through it.

These changes in the lower segment of the uterus cause a detachment of the low-lying placenta and lead to more or less bleeding from the vagina. Hence the symptoms of placenta previa

are hemorrhage and the presence of placental tissue in the dilated os during the first stage of labor.

The hemorrhage may show itself early in the second half of pregnancy, and returns with every further detachment of placental tissue from the uterine wall.

Placenta previa, therefore, implies considerable danger to the mother on account of the hemorrhage, but still greater danger to the life of the child, and hence always demands prompt and efficient attention so soon as recognized.

The hemorrhage is best controlled by tamponade of the cervix and vagina, provided it is done properly. When tamponage is employed labor is bound to be induced.

Other methods of treatment, such as cesarean section, vaginal cesarean section, are severely condemned by the writer.

If a properly executed tamponade controls the hemorrhage in placenta previa until dilatation is complete, and if at the same time it preserves the entirety of the ovum, there can be no room for any method which interferes with nature, such as forcing dilation with dilators, or using that of Braxton Hicks, etc.

The writer then describes his method of treating bleeding during pregnancy. Any case of moderate bleeding is kept in bed and watched carefully for a time. In severe forms of bleeding during pregnancy or labor a hot douche is given and the cervix and upper vagina is very firmly packed with large balls of absorbent cotton squeezed out of carbolated water, 4 per cent., so that the cotton is no longer elastic and will not absorb. The cervix is exposed through a speculum, drawn down with a tenaculum, and packed tightly. Before doing this the finger may be introduced, after Barnes' advice, through the internal os, and the membranes and placenta separated for a considerable radius. The lower vagina is packed with dry gauze and the whole packing held in place by a T-bandage. The packing is removed every six or eight hours, unless severe labor pains demand their earlier removal. Gauze bandages may be used for the tamponade.

In reference to the method of treatment advised in the above paper, I consider the success of the treatment depends very much on how the cervix and vagina are packed.

The object is to control hemorrhage and at the same time induce labor. To induce labor the cervix must be packed firmly, both within and without; that is, the upper segment of the vagina must be tightly packed. If the cervix and vagina are properly packed with iodoform gauze strips through a speculum, hemorrhage is stopped and labor is generally induced in a few hours.

A. C. H.

Psychiatry

W. C. HERRIMAN, ERNEST JONES.

Progressive Spinal Muscular Atrophy With Reference to Heredity. By D. A. CAMPBELL, Halifax, N.S. *Maritime Medical News*, June, 1909.

The writer draws attention to the generally accepted view that muscular atrophies of myopathic origin are associated with heredity as an important factor, while those of spinal origin, such as the Duchenne-Aran type, have not been thought to be influenced to any extent by this factor. He cites briefly two cases of the latter type occurring in collateral branches of the same family, and has been at great pains to gather information based upon which he has completed an interesting chart showing various members of the family, through four generations who had been similarly affected.

The first generation consisted of the two cases mentioned above. The second generation presented eight cases; the third presented sixteen, and the fourth seven. The average age at death was forty-five; the youngest being thirty and the oldest seventy-four.

The writer does not draw attention to the fact that in recent literature many observers have asserted that in the myopathic cases the spinal gray is not normal. Intermediate forms have been described, but the characteristic segmental reference points to a spinal factor in all these cases. The writer's observation of a hereditary influence in those forms where it has usually been thought insignificant adds further argument for the wider kinship amongst the various muscular atrophies.

W. C. H.

Ophthalmology

D. N. MACLENNAN, W. H. LOWRY.

The Eye Complications of the Infectious Fevers. Abstracts of articles in July *Ophthalmoscope*.

Subconjunctival hemorrhage often occurs during a paroxysm of whooping cough and paralysis of accommodation frequently is found complicating diphtheria, and ulcers of the cornea develop during convalescence from measles, but beyond these instances, one does not often hear of there being any eye complications of these diseases. Numerous eye conditions do, however, develop, and possibly the number of these would be greater were there a larger number of general practitioners able to use the ophthalmoscope to recognize them.

In the July number of the *Ophthalmoscope* a number of these complications are spoken of, some of them, it is true, quite rare, but yet it might be of interest to the general practitioner to know of them.

HEMORRHAGE.

Pertussis.—Hemorrhage beneath the conjunctiva is very common, but Fernandez reports a case in a child, aged three, in which there was hemorrhage into the anterior chamber, and when this cleared up, numerous hemorrhages could be seen along the retinal veins, near the disc. All of the hemorrhages in time became absorbed, leaving numerous white patches in their places, but the vision was totally lost.

Measles.—Conjunctivitis and corneal ulcers are often seen in association with measles, but finer changes in the cornea, generally unobserved, are found in 70 per cent. of cases, according to Nantas. These consist of little spots about half a millimetre in diameter, giving a cloudy appearance to the cornea. They last two to four days, and clear up entirely. Sometimes they take the shape of fine lines, when they can be seen with the unaided eye, but the discovery of the dots is usually only possible when the loupe is used.

Chevalier reports a case of double optic neuritis with incomplete hemiplegia of the right arm and leg. Atrophy of the optic nerve followed, with blindness.

Varicella.—Sommier relates a case of a child, aged five, which came to him with numerous vesicles and pustules on the conjunctiva and a pustule on the limbus of the cornea. Characteristic varicella vesicles and pustules were found on the face and surface of the body. The corneal involvement was followed by ulceration.

Chavernoe reports the case of a boy, aged eleven, whose sight failed rapidly after an uncomplicated attack of varicella. Examination of the fundi showed the presence of slight optic neuritis with some fine hemorrhages near the discs. The fields were contracted, and there were large central scotomata. The sight was finally completely restored.

Scarlet Fever.—Conjunctivitis is sometimes present in scarlet fever, and when present is probably due to the introduction of epithelial scales from the lids. Pseudo-membranous and membranous conjunctivitis, due to the streptococcus and less often to the Klebs Loeffler bacillus, are more often present. These conditions usually result in ulceration of the cornea, with a resulting scar.

Abscess and gangrene of the lids have been reported and keratomalacia has sometimes occurred.

Uremic amaurosis is fairly common. Albuminuric retinitis is rare, and when present is due to congenital syphilis, according to Nettleship.

Optic neuritis is rare, and such complications as periostitis, and paralysis of ocular muscles, must be considered as rarities.

Diphtheria.—Membranous conjunctivitis, due to the Klebs Loeffler bacillus, is fairly common, and is serious because of the corneal ulceration which often takes place. Diphtheria of the lacrymal sac sometimes follows nasal diphtheria. Either conjunctival diphtheria or diphtheria of the sac are rarely followed by ocular paralysis.

Paralysis of accommodation is, perhaps the best known of eye complications. Ptosis and squint frequently occur. These paralysees usually attack the patient during convalescence. Paralysis of the superior oblique has been recorded.

Optic neuritis is rarely present.

Influenza.—Catarrhal Conjunctivitis is a frequent symptom of the disease, while iritis and optic neuritis are rarely present.

Spriggs, of London, has reported cases of edema of the lips with severe frontal headache as early symptoms of the disease.

A case of optic neuritis has recently been reported, in which was found retinitis quite similar to that seen in albuminuric retinitis, but the urine showed no albumin. The neuritis and retinitis cleared up, but the vision was reduced to one-half.

Typhoid Fever.—Conjunctivitis, simple or phlyctenular, keratitis, and iritis may develop during the course of typhoid fever. Cataract and thrombosis of the orbital veins are mentioned as rare complications.

Optic neuritis sometimes occurs, and retinal hemorrhages and thrombosis are met with. Paralysis of accommodation, similar to that of diphtheria, may occur during the period of convalescence.

W. H. L.

Scissors Magnet Extraction of Iron From the Eyeball. By
EDWARD JACKSON, of Denver, in *Journal of A. M. A.*

Jackson reports the use of the following device for the removal of iron or steel foreign bodies from the vitreous. After the foreign body is brought to the sclera by means of the giant magnet, and an incision made over it, the points of a pair of blunt-pointed scissors are passed into the wound, the point of the magnet (I presume he means the small hand magnet) is brought to the joint of the blades, and the current is turned on. A couple of snips with the scissors are then made, and the blades are withdrawn. In successful cases the body will be found between the blades. The author says the snipping of the scissors cuts a way through any tissue, tough or otherwise, which may keep the foreign body from being removed by means of the point of the magnet alone. He gives the histories of two cases, in which, after other methods had failed, he has used the scissors-magnet with perfect success.

W. H. L.

Rhinology, Laryngology and Otolology

GEOFFREY BOYD, GILBERT ROYCE.

Diagnosis of Otogenic Meningitis. By HOLGER MYGIND, M.D., Copenhagen. *Journal A.M.A.*

Mygind states that in his opinion there is but one trustworthy objective sign of diffuse purulent leptomeningitis, viz., turbidity of the cerebro-spinal fluid emptied by lumbar puncture caused by over-production of round cells. This is not present in "meningitis serosa." True meningitis differs from "meningeal irritation," or meningismus, as it appears generally some time after the onset of the aural trouble, commences with great suddenness and intensity, may exist without symptoms of retention or of mastoiditis, and runs its course with increasing rapidity and intensity of symptoms.

He states that he has had no ill effects from lumbar puncture as a diagnostic aid in over one hundred cases.

The turbidity of the cerebro-spinal fluid may not be manifest in the first stage, but may become opalescent some twenty-four or thirty-six hours afterward. If then in the first stage of meningitis the puncture yields a clear fluid it is necessary to repeat it once or twice to be certain.

G. R.

Contra-Indications to the Tympano-Mastoid Exenteration in Chronic Suppurative Otitis Media. By E. A. CROCKETT, M.D., Boston. *Journal A.M.A.*, July 31, 1909.

Crockett thus states the contra-indications to the radical operation for chronic suppurative otitis media:

(1) Unless the operator is experienced in the surgery and anatomy of the temporal bone and well grounded in the after treatment of such operations.

(2) It should not be performed on patients with double chronic suppurative middle-ear disease except in the presence of symptoms indicating danger of patient's life.

(3) It should not be performed on a patient's only hearing ear except under the same circumstances.

(4) It should not be performed on young children, that is, children under five years, under practically any conditions.

(5) It should not be performed on a patient with tuberculosis or syphilis except in an emergency.

(6) It should not be performed on any suppurative middle-ear process of however long duration until the ordinary forms of middle-ear treatment have been faithfully carried out for a period of at least six months, except in the presence of symptoms indicating cerebral involvement with danger to life.

G. R.

Symptoms of Intra-Cranial Complications of Purulent Otitis.

By ARTHUR B. DUEL, M.D. *Journal A.M.A.*, July 31, 1909.

Duel in his article states that in meningitis much light has been thrown on the determination of its type by lumbar puncture. In diffuse purulent leptomeningitis the cerebro-spinal fluid is under high pressure, opaque, and contains large numbers of leucocytes and abundant bacteria. In serous meningitis it is under high pressure, contains very few leucocytes and no bacteria. In tuberculous meningitis it is under very high pressure and contains the tubercle bacillus.

At the Babies' Hospital, in seventy-six cases of tubercular meningitis the bacillus tuberculosis was found in the cerebro-spinal fluid of seventy-four.

In cases of acute leptomeningitis the organism was always found.

G. R.

Treatment of Chronic Suppuration of the Maxillary Antrum: An Operation and New Instruments.

By JAMES DONELAN.
The Lancet, June 19, 1909.

In this paper Donelan advocates the intranasal method of treatment as opposed to the alveolar one, and says that he finds operation by the alveolar route to give unsatisfactory results. He uses the alveolar route only when disease of the antrum is of dental origin. He finds that maxillary suppurations are far more frequently caused by infective diseases within the nose or its acces-

sory sinuses than from the teeth, which are perfectly sound in a great many cases.

He proceeds to describe a method of making a large opening into the antrum through the outer nasal wall, and exhibits two special instruments, a curved gouge and a rectangular chisel, which he has devised for the performance of this operation. He avoids the sacrifice of the anterior end of the turbinal, preferring to cut away the middle portion.

G. R.

Gynecology

F. W. MARLOW, W. B. HENDRY.

Retroversion of Uterus. By W. T. BREWIS. *Edinburgh Medical Journal*, August, 1909.

Brewis gives the following description of a modification of Alexander's operation:

(1) After everted the uterus a transverse incision is made immediately above the pubes, extending for a distance of about $2\frac{1}{2}$ inches. The incision is made through skin, superficial fascia and fat. Retractors are then placed at one end of the wound, one parallel to Poupart's ligament, the other parallel to the inner aspect of the thigh. Strong traction is then made, so that the edges of the wound are widely separated, and the inguinal canal area is exposed; but before reaching the inguinal ring a well-defined layer of deep fascia has to be reflected. This is best done by dividing it parallel to the fibres of the external oblique. Divide it about an inch above the pubic spine, carry the knife down to the aponeurosis of the external oblique, and then reflect it downwards until the external opening of the ring is exposed.

(2) Divide the intercolumar fascia, pick up with a hook the mass filling up the external ring, then separate carefully the ligament from the fascial sheath. Then make steady gentle traction on the ligament, and withdraw it until it presents a distinct shoulder. This indicates that a point near the uterine horn has been reached.

(3) Treat the ligament on the opposite side in a similar manner.

(4) Divide both ligaments near the pubic spine and suspend them. Make equal traction on both to keep the uterus in the middle line.

(5) Pass two fingers of the right hand into the vagina to ascertain that the fundus is in the desired position, and at the same time introduce a Hodge pessary.

(6) Pass a stout catgut suture through each ligament at the outer end of the ring, passing the suture through Poupart's ligament, the round ligament, and the external oblique muscle suc-

cessively. Draw the ligature tight, taking care not to include the nerve. Close the external ring carefully with strong catgut.

(7) Pierce the aponeurosis in the middle line and again about an inch from the external ring, and draw the detached end of one ligament through. Do the same on the other side, and suture both ligaments to the fascia in the middle line, and also at the other points where they pass through the aponeurosis.

(8) Bring the fat and fascia together with medium catgut, and close the skin wound with a subcuticular stitch of fine catgut.

(9) Keep the patient in bed a fortnight. Remove the pessary before dismissal.

This operation he recommends for all cases of uncomplicated retroversion, meaning thereby all cases in which there is no inflammatory complication of the surrounding parts.

The advantages he claims for it are: (1) It is an extra-peritoneal operation, and therefore one of little risk. It has no mortality. (2) It leads to no interference with pregnancy or parturition. (2) It is practically certain in its results, and these are as good as those of any intraperitoneal operation. He has performed it in over two hundred cases, invariably with success.

For the supra-pubic transverse incision he claims two advantages over the one commonly used. Its position above the pubes renders it less liable to contamination, and it also permits of free retraction and good exposure of the inguinal area.

W. B. H.

Reviews

Deuteronomy Smith, The Awful and Ethical Allegory of. By a Student of Medicine. With many realistic sketches by another. Edinburgh: E. & S. Livingstone.

In the life of the medical student in the large centres of population there are many pitfalls—and some fall in and never get out. In the small, neat little volume before us there is recorded a medical student's life, successively falling into evil ways. It is set forth in a realistic style, and is here and there funny. Happily, when on his "uppers," the right sort of girl comes along, and Smith braces up, brightens up and behaves himself properly. The sketch will serve to exemplify the dangers of a city life to young men newly arrived from the country and embarking on a college career.

G. E.

Manual of the Diseases of the Eye, for Students and General Practitioners. By CHAS. H. MAY, M.D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, etc. Sixth edition, revised, with 362 illustrations, including 22 plates, with 62 colored figures. New York: William Wood & Co. 1909. \$2.00, net.

This is a very excellent book for students and practitioners, is convenient in size and discusses the diseases of the eye and their treatment from a very practical point of view. A number of paragraphs have been added on recently developed subjects, such as transillumination, the conjunctival tuberculin test, cerebral decompression, etc., and alterations have been made from the fifth edition which make this edition up-to-date. The illustrations are excellent and the colored plates very life-like. This is a ready reference book for the general practitioner and will meet the requirements of most cases. The chapter on ocular therapeutics contains a lot of very useful information which is given in a way to quickly refresh one's memory in details hard to keep in one's mind.

W. H. L.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by W. T. Longcope, M.D., Philadelphia, with the following collaborators: Wm. Osler, John H. Musser, A. McPhedran, Frank Billings, Chas. H. Mayo, Thos. Roth, John H. Clark, James J. Walsh, J. W. Ballantyne, John Harold and Richard Kretz, with correspondents in Montreal, London, Paris, Berlin, Vienna and Carlsbad. Publishers: J. B. Lippincott Company, Philadelphia and Montreal. 1909.

Vol. II., Nineteenth Series, contains exceptionally good articles on medicine, surgery, gynecology, obstetrics, ophthalmology, otology, proctology, psychiatry and pathology. Of colored plates there are four; of plain illustrations, sixteen, and numerous other figures. All are quite practical, of interest both to general practitioners and specialists in their respective lines.

Vol. III., Nineteenth Series, 1909. The articles in this series are very interesting, and will form valuable reading to general practitioners. Dr. Ochsner writes on "Exophthalmic Goitre from the Standpoint of a Clinical Surgeon," and Dr. Dench contributes an article on "The Intracranial Complications of Acute and Chronic Suppurative Otitis Media." Some of the other contributors are Drs. Dienlaffoy, Paris; Theodore Diller, Pittsburg; Henry K. Pancoast, Philadelphia; Solomon S. Cohen, Philadelphia, and Daniel N. Eisendrath, Chicago. All the articles are well written, and the standard of the previous volumes has been maintained.

Dominion Medical Monthly

And Ontario Medical Journal

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Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 203 Beverley St., Toronto, Canada

VOL. XXXIII.

TORONTO, OCTOBER, 1909.

No. 4.

COMMENT FROM MONTH TO MONTH.

Abstract Department.—Dr. Heinrich Stern, editor of the *Archives of Diagnosis*, read a paper before the Association of American Medical Editors in June which was subsequently printed in *American Medicine*. Dr. Stern believes the Abstract Department of a journal is a most important factor in its usefulness and evidently esteems it not only a legitimate but a necessary feature in a properly conducted medical journal. He complains that too little care and attention are given to this side of editorial work, and above all that due acknowledgment of the source of an article is often not made. This is a reprehensible practice, as it tends to bring into disrepute a system which, properly directed, can do more than almost anything else in the diffusion amongst medical men of the present day thought, and to maintain a wide-spread and active interest on the part of the busy practitioner by keeping him in touch with the world's work. He cannot give the time necessary to read the vast number of journals that now cover the field in its various departments, and therefore it is appropriate that he should be kept posted as to what is being said and done in all directions.

It is the desire of this journal to make a feature of the timely and interesting abstract, and also to give credit properly to the individual or journal where it is due.

It happened in our last number (September) that in trying to give a proper acknowledgment to an article (Marie's "Revision

of the Aphasias") in the *New York Medical Journal* we were led into an error from the fact that at the end of the article appeared the well known legend, "Neurologisches Centralblatt." This had reference to a phrase occurring in the body of the last paragraph, but the name of the journal occurring at the end of the paragraph and of the article was hardly a careful arrangement, and could only be misleading.

This affords another argument for the signed article. If the article here mentioned had given the name of the writer no mistake could have occurred; it would have been so acknowledged, and its appearance as an original in the *New York Medical Journal* would not have been overlooked.

W. C. H.

The Requirements for a good medical student have been set out by Charles S. Minot, LL.D., D.Sc.—in a commencement address delivered before the Medical School of Washington University, St. Louis, and published in the *Journal of the American Medical Association*—as the power of reliable observation, intellectual endurance, loyalty; to which might well be added, a good moral character. But how is a medical faculty to select good students to the exclusion of not only the bad ones, but the mediocre as well? Into the ranks of medicine there is no "Open, Sesame." No matter what the former avocation—school-boy, school teacher, druggist, farmer's boy, waiter, conductor—examinations are almost solely the tests for admissions, not exclusions. In the opinion of Dr. Minot the main use of such should be to exclude, and the more of inferior and middle rank excluded the better. By this he no doubt means inferiority and mediocrity in intellectual and not in social status. It would be a very difficult matter, indeed, for a medical faculty to exclude students on account of caste. Given a man whose preliminary training has embraced chemistry, physics, and general biology, and who in two or three years' study demonstrates his natural powers of observance, his capability of maintaining hard, sustained mental labor and his loyalty to his studies, that man will be adjudged amongst the physically, mentally and loyally fit. In the process of sifting out those unfit something in the way of a natural power of observation will be required in the faculty as well, since examinations are not to be the sole test for exclusion and selection. Not all great men, however, are observers themselves. So herein might difficulties arise. But the fact remains, observation is requisite for a good practitioner, and

that upon medical teaching faculties rests the obligation of carefully selecting—not by mere examination alone—those fitted to enter and subsequently maintain in the profession of medicine a good standard. Good character is the first essential.

Hookworm disease has been written about considerably in United States medical literature the past seven years. Most of the literature has been confined to its occurrence in the white race; and the "New World hookworm"—*Necator Americanus*—the "American murderer," has held the boards. It is about one-fourth to one-half inch long, about as thick as a small hairpin, and children more than adults are the subjects of the infection. Fastening to the lining of the small intestine, it wounds the mucous membrane, sucks blood, and produces poisonous substances injurious to the person affected. Entrance is effected to the human body either by the stomach, through contaminated water or food, or through the skin, the latter being the more common. In doing this there is a primary "ground itch," "foot itch," "foot-sore," "dew itch," or "dew poison," therefore the wearing of shoes prevents hookworm to a considerable extent. Entering the blood stream, they reach the lungs, pass up the windpipe, and so down into the gullet to the small intestine. The affection seems to be more severe in the white than the negro race. Patients the subjects of hookworm disease present anemia simulating malaria, dry tallow-like skin, dry hair, prominent shoulder blades, pot-belly, tenderness in pit of stomach, sometimes ulcers on shins, and it is a frequent cause of "dirt eating"—laziness the result of weakness. Intestinal catarrh is set up, digestion is weakened, red blood corpuscles decreased. Where tuberculosis and hookworm disease run concurrently in the same subject, the chances of death are about doubled. As in the treatment of other zooparasitic diseases, the fundamental treatment is to first treat the parasite. A preliminary dose of epsom salt is given, followed by thymol, finely powdered in capsules, 7½ grains for children under 5 years of age; 5 to 9 years, 15 grs.; 10 to 14 yrs., 30 grs.; 15 to 19 years, 45 grs.; 20 to 59 years, 60 grs.; above 60 years, 30 to 45 grs. Care must be taken to eliminate from the diet when thymol is administered, fats, oils, milk, butter, alcohol, and patent medicines containing the latter. Repeat treatment once a week, and determine duration of treatment by either the microscopic examinations of stools or by the easier cheesecloth method, the patient straining his stools, thus washing away all fecal matter and leaving the worms, if any, for detection by the physician.

Medical societies, city, town, county and district, are about commencing their winter's work. That they will be provocative of good results rests mainly with the *personnel* of the officers or programme committee. No doubt many of them throughout Canada will contribute something worth adding to medical literature. The character of the scientific and practical work will be the index of their respective worth to their immediate membership, and in some instances more far-reaching.

But all the real worth to the medical profession as a whole will not alone accrue from the scientific aspect of these meetings, even though the bulk of the transactions be clinical observations and pathologic specimens. Matters of practical medical politics should from time to time be taken up, or one or two meetings during the season be devoted to questions of ethics, business methods in their separate communities, or questions of a broad professional calibre which affect the profession as a whole. No doubt many valuable suggestions concerning the affairs of the profession at large, and even the public, could emanate from the smaller and local societies.

The question of rounding out the organization of the profession throughout the entire Dominion might well be taken up and freely discussed. A step might well be taken by the local societies and the provincial societies whereby a closer intimacy could be engendered and maintained and so pave the way for a fuller representation of the profession in the national medical body, the Canadian Medical Association. Now that the provincial societies are one after another seeking affiliation with the parent body, the time seems ripe for the provincial and local societies to draw closer together, so that in a few short years the entire profession in Canada would present a strong and an united front in securing reforms and such legislation deemed advisable in the best interests of the whole country.

The spirochaeta pallida, first announced by Schaudinn and Hoffman in 1905, and unanimously confirmed by the observations of others, seems to have come to stay as the essential etiologic factor in syphilis. It is not the first time, of course, that an organism has been suggested as the cause in luetic infection. From pathologists and syphilologists of note, and others, in the last twenty-five years, Lassar says, at least 125 causes have been assigned to syphilis. Lustgarten, in 1885, and later Neissen, and still later Siegel (1905), thought they had the specific organism nailed. Schaudinn's stands to-day, and is pretty generally accepted. He

described it as an extremely slender thread, spiral like a corkscrew, closely wound, 7 to 21 microns long, pointed ends with flagellae. Numerous have been the workers in this field. In the initial lesion, in syphilides, in the tissues in congenital syphilis, in gummata, and in a few cases of syphilitic aortitis, it has been demonstrated, but in tabes dorsalis and general paralysis, often spoken of as parasyphilitic diseases, it has not yet been discovered.

Then came the complement-fixation test of Wassermann and the Noguchi modification of that test. In these so-called parasyphilitic diseases this test is bidding fair to establish a previous luetic infection. Being a test elaborate in its technique, recognition coming through the chemical changes in the blood serum, it is not at all likely that others than those working constantly in hematology, and expert microscopists, will ever be able to apply it aptly.

In primary syphilis the demonstration of the spirochete will be of the utmost value in diagnosis, while after that stage the Wassermann reaction will have its field of usefulness.

A new pathogenesis is thus opened up for this disease, so it naturally institutes a revival of the method of incision of the initial sore in the early treatment of the disease. That the adherents of this method are growing in numbers there seems no reason to doubt, although, seeing that any serum treatment must necessarily be yet in its infancy, mercury will undoubtedly stand for some time the premier of all remedies.

But just as the etiologic significance of the spirochete pallida was about established there comes from the recent Congress at Budapest a question of doubt as to it being the exact cause of lues. This doubt emanates from Schereschewsky. In his address before the Congress, and which in substance has been reproduced in *Deutsche Medizinische Wochenschrift*, he reports the results of further investigations on the culture of the spirochete, which results were to the effect that he was not able to infect animals with these cultures. From these conclusions he raises the doubt as to the spirochete being the real cause of syphilis, and goes on to argue that yet further observations are needed, and that possibly the organism has been too readily accepted as the precise cause of the disease.

Acetanilide and antipyrine have had a notable history in therapeutics. The latter was first presented to the attention of the medical profession in 1884; the former in 1886. Then came scores of other similar drugs or mixtures. They immediately

became of great popularity, mostly from their antipyretic action, but later from their pain-relieving qualities. At the present time they are rather discomtenuanced as antipyretics, but hold great sway as analgesics, being largely used in pains of a neuralgic character. With the public they are the ever-ready, ever-handy headache relievers.

Quite early in their employment the profession recognized their administration was not without danger, especially so in promiscuous counter-prescribing, and numerous mishaps found their way into medical literature and even into the public press. Then came the association with them of other drugs, particularly caffeine and sodium bicarbonate. A search throughout medical literature does not reveal the why or the wherefore. Probably the caffeine was incorporated because of its previous well known relieving properties in headaches, probably from the fact it had been used as an antidote to acetanilide poisoning, probably of its stimulation to the cardiac muscle. However caffeine was introduced as a constituent of practically all acetanilide prescriptions, it seems impossible to exactly determine.

About 1890 the alkaline carbonates worked their way into acetanilide mixtures. The reason of their introduction is, too, also conjectural. Herezel, from experiments, showed that acetanilide decreased the alkalinity of the blood. The small amount so introduced would, however, not make the blood much less acid. The idea obtained that alkalis made acetanilide more soluble in the blood. This was subsequently denied. More especially with antipyrine, they were prescribed to reduce gastric irritation.

From the summary of experiments conducted by Worth Hale, Assistant Pharmacologist, U. S. Public and Marine Hospital Service, published as a bulletin of the department under the title, "The Influence of Certain Drugs Upon the Toxicity of Acetanilide and Antipyrine," it seems that "the deleterious effect of acetanilide upon the heart is very imperfectly antagonized by caffeine." In some cases the mixture of the two depresses rather than where acetanilide is exhibited alone. The heart is not slowed after a mixture as when given alone. On the other hand sodium bicarbonate is said to markedly lessen the toxicity of acetanilide upon the heart. Alkaloids of the morphine group increase the toxicity, while salicylic acid and the bromides do not appear to alter its effects.

News Items

DR. T. G. ROBDICK, Montreal, has returned from Europe.

DR. ARTHUR MAYBURY, Toronto, has returned from Europe.

DR. W. J. ROE has been appointed Coroner for the County of Halton.

DR. C. J. SMITH is now associated with Dr. Niddrie at Creemore, Ont.

DR. R. H. CRAIG has returned to Montreal after spending the summer abroad.

DR. JOHN STEWART, Halifax, has been visiting in Vancouver, Winnipeg and Toronto.

DRS. R. A. REEVE, P. G. Goldsmith, and Price-Brown, Toronto, have returned from New York.

DR. MURRAY MACLAREN, St. John, N.B., has returned home after a visit to Banff and Toronto.

DRS. H. A. BRUCE, H. J. Hamilton, and A. H. Garrett, Toronto, have returned from Europe.

SIXTEEN nurses were graduated from St. Michael's Hospital, Toronto, at the recent graduating exercises.

DR. W. H. B. ATKINS, Toronto, after attending the Budapest meeting and visiting Paris, has returned home.

DR. R. W. FAULDS has purchased the practice of Dr. J. H. Ratz, Elmira, Ont., the latter going to Spokane.

DR. WILLIAM H. LOWRY has removed from 2 College Street to 102 College Street, opposite the new General Hospital site.

MONTREAL is shortly to open a new Tuberculosis Institute. By special arrangements the button will be pushed at Buckingham Palace by His Majesty King Edward.

INSANITY in Montreal amongst the poorer classes seems to be on the increase. In 1908 there were 318 new patients committed at the city's expense, 55 more than in 1907.

THE Verdun Protestant Hospital for the Insane, P.Q., has just completed a new wing to accommodate 150 extra patients. There are at present 611 patients in this hospital.

DR. WALTER McKEOWN and Mrs. McKeown, after attending the Canadian Medical meeting at Winnipeg, went on to the Coast and returned home via San Francisco, Denver and Chicago.

A HEALTH COMMITTEE is being agitated for Montreal to consist of five doctors, who will be paid for their services. This is thought to be a better plan than a Board of Health of aldermen, who know nothing of medical and health matters.

INTERPROVINCIAL registration was the subject of a conference of representatives from Manitoba, Saskatchewan, Alberta and British Columbia at Banff, on the 28th of September. Dr. Spankie, Kingston, represented the Ontario Medical Council.

DR. C. A. LANGMAID, '06 graduate of Toronto, has returned from the Old Country, after spending three years abroad, attending the hospitals in London, Edinburgh, Glasgow, Dublin and Paris. He has settled at 23 Brunswick Ave., and will practise general medicine.

PROVINCIAL sanatoria were advocated by a large delegation which waited on Sir James Whitney a short time ago. In promising consideration of the question by the Government the Premier said he would be in favor of discontinuing the Government grant to those hospitals throughout Ontario which would refuse to take such patients. He thought there was too much "scare" about the subject of tuberculosis.

THE Montreal General Hospital is about to erect a new pathological building, which will be second to none on the continent. A large addition to the main building is also contemplated. During the first six months of the present year, 1,576 patients were admitted, whilst the number of outdoor consultations amounted to 25,063. The receipts were \$59,059; disbursements, \$65,245. During the same period \$7,700 was received in legacies.

HOSPITAL OPENED AT INGERSOLL.—In the Alexandra Hospital, of which Miss Hodges, of London, is lady superintendent, the citizens of Ingersoll have an institution to which they can point with justifiable pride. The formal opening of the hospital took place on the 22nd of September, and was attended by hundreds, all of whom were delighted with the splendid building, the

homelike atmosphere and the well-furnished wards. It is generally recognized as one of the finest hospitals in the province.

THE Academy of Medicine, Toronto, opened for its season's work on the evening of the 5th of October. Dr. McPhedran delivered the presidential address. Following this Dr. W. P. Caven read a paper on diagnosis of gastro-duodenal ulcer. Dr. C. F. Hoover, Cleveland, Ohio, dealt with the medical treatment, and Dr. Ingersoll Olmsted, Hamilton, with the surgical treatment. Amongst those who discussed these papers were Dr. A. McKinnon, Guelph; Dr. Arnott, London, and Drs. H. A. Bruce, A. Primrose, N. A. Powell, H. B. Anderson, Warner Jones, and W. H. B. Aikins, Toronto. Other out-of-town medical men present were Drs. Hoig, Oshawa, H. Howitt and Peter Stuart, Guelph.

THE forty-third annual meeting of the Canadian Medical Association will be held at Toronto, June 1st, 2nd, 3rd and 4th, 1910. The following are the officers and local committees. President, Adam H. Wright, Toronto. General Secretary, George Elliott, Toronto. Treasurer, H. B. Small, Ottawa. Committee of Arrangements, D. J. Gibb Wishart, Chairman; Allen Baines, J. F. W. Ross, R. W. Bruce Smith, Chas. J. Hastings. Transportation and Entertainment, Bruce L. Riordan, Chairman; J. F. W. Ross, George A. Bingham, W. P. Caven, J. M. Cotton, H. A. Bruce, T. B. Richardson, H. A. Beatty, Jas. Spence. Reception and Publicity, R. W. Bruce Smith, Chairman; A. A. Macdonald, Chas. J. Hastings, T. F. MacMahon, John A. Amyot, W. H. B. Aikins, W. A. Young, Fletcher McPhedran. Local Finance and Exhibits, Samuel Johnston, Chairman; J. O. Orr, H. J. Hamilton, J. A. Roberts, O. A. McNicol, W. B. Hendry. Programme, E. E. King, Chairman; A. H. Wright, D. J. Gibb Wishart, George Elliott, Helen MacMurchy. Credentials, A. Primrose, Chairman; R. J. Dwyer, C. P. Lusk, H. T. Machell, Price Brown. Surgery, F. N. G. Starr, Chairman; I. H. Cameron, Walter McKeown, C. L. Starr, A. H. Perfect, A. B. Wright. Medicine, H. B. Anderson, Chairman; A. McPhedran, John Ferguson, J. S. Hart, A. R. Gordon, B. O'Reilly. Obstetrics and Gynecology, S. M. Hay, Chairman; K. C. Mcllwraith, Fred. Fenton, F. W. Marlow, H. E. Clutterbuck. Eye, Ear, Nose and Throat, G. R. McDonagh, Chairman; R. A. Reeve, J. M. MacCallum, Gilbert Royce. Pathology, J. J. Mackenzie, Chairman; O. R. Mabee. Pediatrics, Allen Baines, Chairman; Wm. Goldie, Jos. Graham. *February 1st, 1910, has been set as the time limit for submitting papers. Abstracts of all papers must be sent in to the General Secretary by the 15th of April, to provide for printing and posting of same.*

Publishers' Department

PRECAUTIONARY MEASURES. As every physician has constantly under his care cases of either typhoid, malarial or bilious fever, it is well to remember that precautionary measures are possible, and, if taken in time, much of the trouble with these cases is avoided. If it be true that the materies morbi of these diseases belong to the bacillus group, the remedies manifestly are an antiseptic and an antipyretic. As an intestinal antiseptic we have nothing better than salol. The consensus of opinion is in this direction. When we add the antipyretic and anodyne effect of antikamnia, we have a happy blending of two valuable remedies, and these cannot be given in a better or more convenient form than is offered in Antikamnia and Salol Tablets; each tablet containing $2\frac{1}{2}$ grains antikamnia and $2\frac{1}{2}$ grains salol. The average adult dose is two tablets. Always crush tablets before administering, as it assures more rapid assimilation. As the necessity of intestinal antiseptics in the treatment of this class of diseases is fully recognized, would not the scientific treatment of the conditions preceding them be the administration of the same remedies? Fortifying the system against attacks is the best preventive of them.

THE CHILD THAT FAILS TO THRIVE is one of the many troublesome and vexations puzzles that the family practitioner is called upon to solve. Malnutrition, slow growth and development, sluggish metabolism, unusual susceptibility to digestive and respiratory disorders, mental dulness, physical lassitude and lack of snap and ambition, constitute a clinical picture that every physician of experience will readily recognize. To arrive at any definite determination in regard to the treatment of such a patient, a careful and thorough physical examination is essential, in order that any of the causes which act reflexly through the nervous system may be discovered and properly dealt with. Post-nasal adenoids,

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a redundant prepuce, ascariæ, eye strain, as well as other local irritations, may be more or less responsible for the child's backwardness, both mental and physical; constitutional diatheses, such as syphilis, tuberculosis and lithemic states, should also be looked for and intelligently treated. After the discovery and removal of the cause, tonic and reconstituent treatment is almost invariably indicated, and among the reconstructives especially adapted to the delicate digestive organs of the under-nurtured child, Pepto-Mangan (Gude) is easily first. Its iron and manganese content exists in organo-plastic combination with peptones, and the preparation, as a whole, is so pleasant and readily tolerable, as well as immediately and wholly assimilable, that children of all ages take it readily and benefit materially from its corpuscle-building and hemoglobin-contributing power. Unlike most iron-containing remedies, it does not injure the teeth nor cause constipation.

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXIII.

TORONTO, NOVEMBER, 1909.

No. 5.

Original Articles

THE ACTION OF SOME REMEDIES IN MYOCARDIAL DISEASE.*

BY PROFESSOR V. E. HENDERSON, TORONTO.

It is with some hesitation that one approaches the subject of myocardial disease from the standpoint of the therapist. The first cause of hesitation is the lack of much new matter and the difficulty of presenting the old in a new light. The second is that the pharmacologists have not as yet been allowed to carry out treatment under such conditions in a sufficient number of cases to have acquired any real knowledge of the underlying pathological physiology of the diseased myocardium. Our knowledge of the action of drug stuffs upon the normal heart muscle is every day becoming more exact, and from what we know of the diseased conditions we can in many cases fairly infer what will occur when certain remedial means are adopted.

It will perhaps enable the whole subject to be approached in a fresh manner if we follow the new physiological descriptions of the heart's action and consider the pathological conditions which effect rhythm, contractility, irritability, conductivity and tone.

The pathological variations of rhythm, or more simply rate with a normal heart beat, are of two types—a super-normal or a too fast rhythm and a sub-normal or too slow rhythm.

Super-normal rhythms.—The normal heart beats in what we may call a superoptimal rhythm; that is, if we slow the beat by stimulating the vagus, the beats increase in size owing to the relaxation of the muscle being more complete, as may be seen in Diagram A. A heart warmed artificially beats more rapidly, but relaxation is equally good; its contractility also remains as before

* Read before Section in Medicine, Academy of Medicine, Toronto.

or increases; in other words, its rhythmicity has altered positively. See Diagram B. The heart in moderate fever beats rapidly, not owing, of course, to the increase in temperature alone, but also to the action of the toxins, but its beat in many cases is efficient, contractility in tone being normal. If we judge from the action of drugs, it is still under the control of the vagus centre. Its rate may be decreased by digitalis, for example. In severe toxemia there is some experimental as well as pharmacological evidence that the vagus centre has lost control of the heart. Digitalis, strophanthus is no longer effective. The action of these drug stuffs is largely through the vagus centre, though in part they effect rhythm by acting on the vagus endings in the heart. Kothe has presented some evidence that adrenalin, which acts upon vagus endings in the heart, has not entirely lost its power to slow the beat. For this purpose it must be administered intravenously in doses of 0.2—1 c.c. In some cases, however, this drug also fails to produce any effect. We have, however, a drug stuff which will act very powerfully upon the heart muscle to decrease its rhythm. This drug stuff is barium chloride, and the work of Scaffidi would lead me to try it as an emergency agent in extreme cases. The administration would, of course, be made intravenously, as its action is very slow and uncertain if administered per os.

A second class of super-normal rhythm are those which are due which are secondary to broken compensation and in which the heart muscle is still moderately healthy and the beat of the heart, while not unduly fast, is regular. In this class of case digitalis is efficient in reducing the rhythm to normal. The main treatment, however, would be rest until compensation is restored, and then carefully graduated heart exercise to aid in muscular hypertrophy. This heart exercise may be obtained by carefully graduated baths with their reflex effects upon the heart work, or by mild walking exercises or by Swedish movements. In the later stage of these cases the beat frequently becomes irregular and the muscle fibre has suffered more severe pathological changes. When one administers digitalis to cases in which the rhythm is fast but regular, any irregularity occurring during its administration should lead to hesitation. A third class of case are those in which the cells about the mouths of the great veins have become relatively less irritable and those in the bundle of His relatively more irritable. The heart beat arises in the bundle of His or its source in the specialized fibres in the atrio-ventricular node. The beat spreads from its point of origin in the node to both auricle and ventricle simultaneously, both chambers beat in unison. In many of these cases which McKenzie terms cases of nodal rhythm the

action of digitalis is almost "miraculous." I may point out that in these cases of nodal rhythm the action of the heart is often irregular, nor does digitalis serve to restore it to a normal rhythm, but owing to its beneficial action in slowing the heart and in proving tone and contractility may enable the heart to regain its compensation. The pathological changes in this class of cases consist in degeneration of muscle fibres due to overwork and to localized sclerosis, but the main mass of the muscle fibres are still healthy.

In the fourth class of cases the muscle cells are very generally diseased. The pathological changes usually found consist in marked arteriosclerotic changes in the coronary artery and fibrous and fatty changes in the muscle cells. Clinical symptoms consist in irregularity and lack of response to sudden exertion. In these cases, as a rule, slowing of the heart cannot be achieved with digitalis, though it seems that there is little danger in its administration with caution if heart block has not already occurred. The treatment needed seems to be largely rest and the doing away with nervous strain, the abandonment of worry. A healthy life, with gentle exercise and abundant sleep, for which purpose chloral or bromides may have to be used, is the treatment to be adopted.

Sub-normal rhythms.—The sub-normal rhythms may be divided into several classes. The first may be described as true bradycardia: in these cases the rhythm is normal in character, but slow. This may be due to inherent conditions in the heart muscles, in which case caffeine and camphor given subcutaneously are the drug stuffs which seem to be indicated. Both of them increase the rate of the heart's action. The second cause of a true bradycardia may be vagus irritation, due, for instance, to meningitis, cerebral tumors, or may seem due to occur in reflex irritation from the abdominal cavity. These cases are, of course, best met by doing away with the original cause or by some drug stuff such as chloral or bromides, which decrease the activity of the vagus centre. Bradycardia is often diagnosed when the condition is one of missed beats, that is, those cases in which every alternate ventricular contraction is not of sufficient force to cause a pulse wave at the wrist, or when the condition is one of heart block, that is when each auricular beat is not followed by a beat of the ventricle, but when possibly only every second or third auricular beat is so followed. In these two last types of sub-normal rhythm (missed beat heart block) caffeine, which increases the conductivity and also the rate, seems to be the most promising drug stuff if any treatment is needed.

Changes in contractility might also be of two types, hypercontractility, of which we know nothing, and sub-normal contractility,

which occurs so commonly in acute toxemia. In this case digitalis has also no or little action. Caffeine also seems to be uncertain, for adrenalin the evidence is slight, but promising, and barium chloride remains still to be tried. In moderate fever digitalis does improve the contractility, as does adrenalin. When the sub-normal contractility is due to exhaustion owing to overwork of the heart, as occurs in broken compensation, digitalis is to be relied upon. Caffeine is also of service. Rest and gentle exercise are the curative means.

Conductivity may be decreased in certain types of heart disease. In these cases we find that either the conduction from the point of origin of the normal heart wave about the mouths of the great veins or from auricle to ventricle through the bundle of His, is decreased, and in consequence we have either nodal rhythm or heart block. If heart block has occurred digitalis must not be used, as it increases the conductivity, and in consequence will make the block more complete. It seems remarkable that it should be of service in nodal rhythm, but this fact has been established by the careful work of McKenzie. Caffeine has this advantage over digitalis in both these classes of cases, that it increases conductivity instead of decreasing it.

The tone of the heart muscle becomes deficient in acute toxemia, and here also digitalis is of no value. Caffeine may be of use, as it markedly increases muscle tone throughout the body. It too seems to fail in the majority of cases, and as the condition is accompanied with a rapid beat it is considered contra-indicated by many physicians. Barium chloride is the only drug stuff which seems to promise to be of value in these cases. When the tone is decreased owing to exhaustion and the muscle fibres are still relatively healthy, as for example in most cases of broken compensation, digitalis is of great value.

The blood supply to the heart is very important from the standpoint of treatment. We can now lay it down as a rough rule that drug stuffs which constrict peripheral vessels dilate the coronary arteries and *vice versa*. Digitalis has little action upon peripheral vessels, but it slightly increases the amount of blood passing through the cardiac circulation. In the case of angina pectoris the blood pressure frequently is high. The strain on the cardiac muscle is great. The administration of amyl nitrite frequently gives a relief, but as McKenzie has shown the administration blood pressure is frequently high again in five to ten minutes. The pain, however, does not depart. The temporary relief of the strain upon the heart has been sufficient to do away with the pain. In other cases amyl nitrite is not effective in decreasing the pain, and as in a case

described by McKenzie the cause here probably lies in a coronary vessel spasm. Amyl nitrite will not decrease this spasm, while possibly some drug stuff which increased peripheral pressure would dilate the coronary vessel, adrenalin for example. Such heroic treatment is, however, not likely to be adopted, and we must hope to find our cure for such a case in the administration of some sedative to the central nervous system. In the case to which I refer morphine was successful. Arteriosclerosis of the coronary vessels we cannot overcome, and in consequence our treatment should be directed towards encouraging a gentle, careful life, with lots of fresh air, good sleep, and little worry. The only drug stuff which we can suppose, and its action is completely unknown, will relieve in the slightest the trouble is potassium iodide.

ON THE REPAIR OF INJURIES TO THE PELVIC FLOOR

BY ARTHUR C. HENDRICK, M.A., M.B.,

Clinical Assistant in Gynecology, Toronto General Hospital.

In this article injuries to the pelvic floor, the result of child-bearing, only will be dealt with.

Such are usually spoken of as ruptures of the perineum, either incomplete or complete, the latter condition existing when the sphincter ani muscle is torn through.

For the correct understanding of these lesions of the pelvic floor it is well to review shortly the development, anatomy and the physiology of the pelvic diaphragm.

The pelvic diaphragm is an adaptation in man to the erect posture. In four-footed animals this diaphragm or floor is rudimentary, and is composed largely of the tail or caudal muscles, viz., the pubo-coecygeus muscles and the ilio-coecygeus muscles.

In man, owing to the shrinkage of the tail (coecyx) some of the fibres of the pubo-coecygeus muscles, on losing their attachment to the coecyx (tail), become stranded on the ano-coecygeal ligament, the rectum (pubo-rectalis) portion of the levator ani muscle, pre-anal raphe, central point of the perineum, and the sides of the vagina in the female.

The fibres of the ilio-coecygeus muscle also migrate over the obturator fascia, forming at its new attachment the "white line," a structure peculiar to man.

These two muscles, *i.e.*, the pubo-coecygeus and the ilio-coecygeus, by their fusion form the levator ani muscle of human anatomy, the most important structure of the pelvic diaphragm.

On the integrity of this muscle depends the equilibrium of the circulation through the pelvic organs, and also their stability of relations to one another.

The levator ani muscle exerts an upward pressure upon the pelvic viscera, and they in turn have their pressure due to gravity deflected by this muscle against the inner aspect of the anterior portion of the pelvic ring, *i.e.*, against the inner surface of the bodies and rami of the pubic portions of the os innominata, when the subject is in the erect posture.

In the normal condition of the viscera the vaginal canal in the erect posture is directed downwards and forwards, making an angle of about 45° with the horizon. The canal is really a transverse slit with a lateral recess at either extremity of the slit, and the anterior and posterior walls are in approximation.

When the rupture of the perineum, so-called, takes place the tear usually begins in one of the lateral recesses of the vaginal canal above described, involving its mucous membrane and the fasciae, and fibres of the sphincter vaginae, transversus perinei and levator ani muscles and the tissues of the perineal body. This is spoken of as an incomplete rupture of the perineum.

If the injury involves the sphincter ani muscle it is designated a complete rupture of the perineum.

The skin of the perineum does not of necessity always suffer injury.

I have examined recent tears of the levator ani muscle when the skin was quite intact, but on passing one's finger in to the vagina one found the mucous membrane of the lateral vaginal recess torn, and also could demonstrate the lacerated muscle and fasciae. However, the perineal body is usually torn through, and often presents the appearance of a mass of subcutaneous fatty tissue, which, indeed, it chiefly is.

It was once thought to be an important agent in the support of the pelvic viscera, but it is now known to be really a vestigial structure, and its existence is due to the opening of the rectum into the "anal pit." The rectum was formerly described as being derived from the dorsal portion of the cloaca, which was shut off from the ventral portion, uro-genital sinus, by the ingrowth of lateral septa. These septa were thought by their fusion to form the perineal body.

Accepting this older account as true, it is impossible to explain certain malformations of the anus, rectum, etc.

From the above description it is clear that the perineal body, as usually understood, is not the important structure it was once thought to be. It lies below the level of the true pelvic floor and has very little to do with the maintenance of the normal pelvic

relations. As has been already stated, the levator muscle is the most important structure in the pelvic diaphragm.

Now, tears of the levator ani muscle may be either mediate or central, *i.e.*, speaking with regard to the vaginal outlet. Remembering that the fetal head occupies an oblique diameter of the pelvic ring, we should expect the lateral tears to be the most frequent, and they are so.

Most commonly the tear begins as stated in the lateral recess of the vaginal canal, involving mucous membrane, fascia of Colles, sphincter vaginae muscle, triangular ligament and the pubo-rectalis portion of the levator ani muscle.

The repair of these lacerations may be undertaken immediately by the obstetrician, but this is seldom done efficiently, and the result and consequences are what one sees most often in hospital practice.

Now, what happens in cases when these tears are left unattended to? In a few rare cases nothing serious may occur and the patient is quite unaware of their existence.

More often the following is the sequence of events.

Owing to the loss of support from rupture of the pelvic floor the circulation of blood in the pelvic organs is disturbed.

The vaginal tissues after parturition are much hypertrophied, just as the uterine tissues are, and owing to this disturbed circulation, the result of non-support, suffer a subinvolution in the same manner as the uterine tissues may. The result is the vagina remains patulous and open-mouthed owing to the injury of its purse-string, the sphincter vaginae muscle.

The subinvolved vaginal walls, owing to the tear in the levator ani muscle, are no longer in apposition. The canal also loses its oblique direction and comes to open more directly downwards in the erect posture. This is due to the sagging of the pelvic floor, which tends to pull the vaginal walls downwards and backwards. This same effect is seen in regard to the anus and rectum.

In other words, the vaginal outlet seems to sink away from the pubic arch.

Owing partly to the changed direction and partly to the injury to the sphincter vaginae muscle, the subinvolved vaginal walls may show signs of prolapse.

This prolapse may involve the adjacent structures, *i.e.*, bladder in front, forming a cystocele, or the rectum posteriorly, developing a rectocele.

As a rectocele develops there is a tendency for the posterior vaginal walls to pull upon the normally placed posterior lip of the

os uteri, thus pulling it forwards and tending to bring about a retroversion of the uterus.

This manoeuvre brings the uterine body in line with the vaginal canal, and besides the intra-abdominal pressure is now no longer exerted upon the posterior aspect of the uterine body, but is now diverted against the fundus, acting much the same as one pushing a cork into a bottle, the uterus being the cork and the vaginal canal the bottle.

After retroversion, if the conditions maintain, one may finally develop a prolapse of the uterus into the vagina, or even, procidentia uteri.

Aside from these physical signs, the patient complains of pains indefinite in character, but referred to the pelvic viscera, such as irritation of the bladder, rectum, etc.

The operation for repair of the pelvic floor is thus undertaken for the relief of some of the following conditions:

1. A patulous vagina.
2. A cystocele.
3. A rectocele.
4. A rectocele with retroversion.
5. Prolapsus uteri.

Numerous methods of repair have been devised for restoration of the pelvic floor.

Emmet was one of the first to recognize the fact that the injury was really in the pelvic diaphragm and that the perineal body had nothing to do with it so far as the consequences were concerned.

Emmet devised what is known as the paring operation, in which a butterfly-shaped flap is pared upon the posterior vaginal wall. When the flap is pared off the borders of the raw surface are brought together, a few deep stitches having been previously placed.

The criticism of this procedure is that sometimes the mucous surface is denuded and in consequence as the lines of suture heal and retract the patient may complain of much pain and discomfort. These lines may be felt as permanent folds in the vaginal walls.

Again, when the circulation is restored by repair, much of the redundant so-called vaginal mucous membrane disappears and the vagina becomes less patulous.

The operation which seems best to meet the demands of anatomy and of physiology consists in the method of flap-splitting employed by A. Russell Simpson and perfected by Lawson Tait and others.

Operation.—The patient is prepared by having the bowels thoroughly moved by castor oil, at least given twelve hours previously, and an enema four hours previous to the operation. The pubic

and vulval hair is shaved and the external genitals thoroughly cleansed.

The patient is anesthetized and placed in the lithotomy position. The vagina is washed with green soap and water, then a 1:2,000 bichloride solution, followed by plain water. The water speculum is placed upon the pubis, so the water may flow over the field of operation. It is not inserted into the vagina, as it would be in the way.

The operation is begun by exerting the remnants of the hymen. These are easily found usually, and are designated *carunculae myrtiformes*. These are then seized with artery forceps, one on either side.

By crossing the forceps one may estimate the size of the ostium of the new outlet to be constructed.

Having done this, next seize the outlet at the median point posteriorly at the junction of the skin of the perineum and the mucous membrane of the vagina, and raise it gently, at the same time snipping a small opening into it with the scissors.

Next insert the small, sharp-pointed blade of the angular scissors into the opening and carry the incision along the line of junction of mucous membrane and skin, *i.e.*, just external to the line of attachment of the hymen, up to the forceps previously placed. The reason for keeping just external to or through the line of hymenal attachment is because the vulvo-vaginal glands open just external or outside the hymen, and if one wandered far afield the opening might be interfered with.

One must also be very careful not to injure the nymphae or labia minora, for they are very sensitive structures and are highly endowed with nerves.

Having made this initial incision, one sees below the skin the shiny deep fascia, the triangular ligament.

The next step is to reinsert the scissors in order to cut through this fascia before one can expose the muscle fibres of the levator ani. In making this cut guard the mucous membrane with the finger inside the vagina.

If this incision gets through the fascia properly the muscle may now be exposed by a little dissection. The same procedure is gone through on the opposite side of the vaginal outlet and the muscle exposed.

The last step and the most important is the separation of the vaginal mucous membrane from the rectum. So far one has two pouches excavated, one on either side, with the muscle in their outer walls. Their inner walls are fused still along the line of junction of the vaginal mucous membrane and the rectum.

To separate these structures make a small transverse cut with the scissors at their junction in the median line, then gently peel the vaginal mucous membrane from the underlying structure, being careful not to injure the rectal wall. This dissection is facilitated by using a wrapping of gauze about the finger. The separation is only carried sufficiently forwards to allow the muscles (levator ani) to come into apposition.

By hooking one's finger into the lateral walls of this point one can readily feel the ruptured borders of the muscle.

The object now is to approximate the median borders of these two levator ani muscles.

That is accomplished in this way:

The usual perineum needle is first passed unthreaded, just external to the skin margin, *i.e.*, not through the skin.

The fibres of the levator ani muscle of the corresponding side are hooked *up on* the finger and the needle passed around them. The finger thus protects the rectum from injury. The needle is now threaded with strong silkworm gut and withdrawn.

The one end of the suture is caught with forceps.

The needle is passed on the opposite side in the same manner, the free end of the ligature is threaded into it, and the needle is again withdrawn.

This is the first deep stitch and is usually placed about the middle of the space. The succeeding stitches are passed in the same manner, the assistant meanwhile grasping the two ends of the stitch already passed with forceps, and making some traction, so as to assist in bringing the muscle fibres into view.

Usually one or two stitches are passed behind the initial stitch. When the stitches in front of the initial stitch are being placed one takes particular care to have one of them pass through the little frenum of tissue left in the median line. This precaution prevents any possible space remaining between the muscle and the fascia and mucous membrane, and so prevents abscess formation.

The last anterior stitch passes close to the free border of the vaginal mucous membrane, picking it up in a sort of purse-string suture style.

The deep stitches being placed, they are next tied. It is advisable while the operator is tying one suture to have the assistant cross the next suture. This takes the tension off the stitch being tied.

When the deep sutures are tied they are collected each on forceps to one side and held by the assistant.

The skin edges are next adapted by superficial stitches placed alternately with the deep ones. The ends of all the deep sutures

are tied with one knot and the same is done with the superficial ones. This assists one very much in their removal.

When there is a complete rupture of the perineum, *i.e.*, when the sphincter ani is torn through, the following modification in the operation is done:

Instead of a V-shaped incision, one now makes an H-shaped incision by carrying backwards the lateral sides of the V incision.

When these flaps are raised the ends of the sphincter ani are exposed. It might be well to mention that one can tell when the sphincter is torn through by noting the absence of the foldings or puckerings along the anterior segment of the anal opening.

When the ends of the sphincter are exposed by raising the H-shaped flap they are seized on either side with artery forceps. The forceps are then made to make a half revolution towards the middle line. They are now in juxtaposition and are tied together or held by the assistant. Then a few catgut stitches are passed through the denuded ends of the sphincter ani, and perhaps one deep silkworm gut suture. The rent in the bowel is thus closed and the operation now devolves itself into one for an incomplete rupture, as above described.

The operation as above described has been most successful in the hands of Dr. J. F. W. Ross, the head of the Department of Gynecology in the University of Toronto. The result certainly justifies all that is claimed for it.

In the hands of those untrained, especially in pelvic surgery, the operation devised by Emmet may appeal to them as being more easily performed, but to obtain the best results it is wiser to follow a method founded upon a correct understanding of the development, anatomy, and the physiology of the pelvic diaphragm.

After treatment.—The patient is returned to bed and the catheter is passed within six hours, and then every eight hours until the end of the first forty-eight hours. Then an oil enema of three ounces of olive oil in warm water is given and the patient is allowed to void urine in the natural way.

This enema is repeated every morning, or if one chooses a single enema may be employed.

The stitches are kept dry by being wrapped in absorbent cotton and are removed about the fourteenth or fifteenth day after operation.

SIXTEENTH INTERNATIONAL CONGRESS OF MEDICINE AT BUDAPEST.

BY DR. W. H. B. ATKINS.

The Sixteenth International Congress of Medicine was opened on the 29th of August, at 11 a.m., in the large banqueting hall of the Municipal Building, in the presence of the Archduke Joseph, representing the Emperor of Austria and King of Hungary, patron of the Congress. Many ministers, numerous diplomats and high officials, the delegates from 32 governments, and about 3,500 medical men assembled at Budapest from all parts of the world to assist in this scientific reunion. Owing to the indisposition of President Muller, the meeting was opened by Professor Baron Frederick de Koranyi, who expressed words of welcome. After the Hungarian national hymn had been sung by a specially selected choir, His Imperial and Royal Highness Archduke Joseph opened the Congress in the name of His Imperial and Apostolic Royal Majesty in the following words:

"Messieurs,—It is with a particular satisfaction that I have the honor to open, representing His Majesty, the Sixteenth International Medical Congress.

"Messieurs,—To be at the service of humanity, to consecrate all the physical forces and intellectual faculties that God has given us to the well-being of our fellow-man, remains always the ideal object of our existence. We cannot do without the help of others, and the individual value of each man augments in due measure as his work is more profitable to other individuals, or to humanity at large. What is true in regard to a person is still more true in regard to an entire profession. In this respect all equably minded people must recognize that there are but few professions exercising on the individual, or on the family, or as a last consequence on the whole life of states, an influence so profound and so widespread as that of the medical profession. Every living being has the desire and the right to be happy, and this for as long a time as possible, and it is no new truth that the fundamental condition of happiness on this earth is a healthy, satisfied, long life.

"As the strong arm and vigorous spirit of a father in good health shape the prior condition and state of happiness for the whole family, so the health and vitality of successive generations constitute the well-being of the state, and, in consequence, humanity.

"That is why, gentlemen, when with your knowledge you exert yourselves to preserve from peril the health of the individual, to cure diseases and restore the capacity to work, you try to safeguard the whole population against that which attacks the health, and which threatens human life. In addition to the recognition of the individual, you are fully assured of the gratitude of mankind. Outside the resulting profit from your scientific activity, one ought still to recognize in this activity the inherent value of all scientific efforts; to have his place in the progress of the civilization of humanity. Besides, one ought not to forget that in your profession each of your words and acts is destined to become an aid to the suffering. You have the mission to cultivate in every respect the noble feelings of humanity, not only in the service of science, but also the feelings of kindness of all.

"We also know the great progress that your science has made in olden times. We all know the great success you have achieved owing to your knowledge of suffering humanity. With a full recognition of the results that you have already attained; with the firm hope that this assembly will contribute greatly to the development of medical science, and that it will in a measure elevate the level of civilization, in general, relieve the suffering of individuals and strengthen the economical principles of the state; I ask the richest blessing of the All Powerful on all the members of this assembly and on their work. In the name of His Imperial and Apostolic Royal Majesty I declare the Congress open."

* * * * *

Following the address of the Archduke, His Excellency M. le comte Albert Apponyi, Hungarian Minister of Education, delivered an erudite speech in French, and in the choicest terms extended a warm welcome from the Hungarian Government to the representatives of medicine of nearly every civilized country.

Then the Lord Mayor of Budapest, Herr Calman de Fulepp, extended a cordial welcome in behalf of the municipality to the visiting delegates.

THE PRESIDENT'S ADDRESS.

Professor Muller, the President of the Congress, being indisposed, his address was read for him. In this was presented an historical review of the various International Medical Congresses, the first being held in Paris in 1867, consisting of 333 French and 589 foreign members. Florence, Italy, was the seat of the second Congress. Four years later, in 1873, the third

Congress was held in Vienna, when compulsory vaccination was recommended to the various European governments. The fourth Congress was held at Brussels in 1875. The principal topic of discussion at this meeting was the role which alcohol played as a therapeutic agent.

In 1877 the fifth Congress was held at Geneva. Among the noted men present were Bouchard, Broadbent and Esmarch. Amsterdam had the honor of the sixth Congress in 1879, with a membership of between 400 and 500. Lister, Virchow, Donders, Sayre and Semmola took a prominent part in the work of this meeting. The membership of the seventh Congress, which was held in London in 1881, was 3,182. Many of the noted men of the time were there present. Virchow, Pasteur, Paget, Lister, Huxley and Chareot were on the platform at the opening meeting, which was opened by the then Prince of Wales.

The eighth Congress was held at Copenhagen in 1884, with a membership of 1,700. The ninth Congress was held at Washington in 1887. Over 7,000 members were registered at the tenth Congress, held at Berlin in 1890, when Virchow was president, and Koch, Lister, Bouchard, Bergmann and Billroth took part in the discussion. The eleventh Congress was held at Rome in 1894; the twelfth at Moscow in 1897; the thirteenth in Paris in 1900, with a membership of over 6,000. The fourteenth Congress was held at Madrid, under the patronage of King Alfonso. The fifteenth Congress was held at Lisbon in 1906 under the patronage of King Carlos.

Dr. Muller concluded his address as follows: "Medicine is a science of expediency; it originated the necessity to relieve human suffering. To-day we work upon the strictest scientific methods which are at the disposal of the exact physical sciences, and we have successes to point to, to which undeniable statistics bear witness, showing with what weapons medicine can safeguard the life and health of the individual, and how fortified she is to protect whole continents against the ravages of epidemics. With full right our breasts are filled with the noble consciousness that no science stands up so wholly in the service of altruism as medicine."

ADDRESS OF THE SECRETARY-GENERAL.

Then Professor Emil de Grosz, General Secretary, delivered an able address, in which he described the work of organization of the Congress since its inception in 1906, and reported that 3,432 members had already signed the roll and that there were

900 ladies accompanying the members; that 274 delegates had been sent from various governments; 149 from various universities; 327 from municipalities and learned societies. The numbers of members, from the following countries, enrolled were as follows: America (United States), 202; Argentine Republic, 37; Austria, 235; Belgium, 17; Bosnia, Herzegovina, 9; Brazil, 25; Bulgaria, 18; Chili, 4; Cuba, 6; Denmark, 10; Egypt, 21; France, 281; Germany, 288; Great Britain and Ireland with the Dominions beyond the seas (Dominion of Canada, 14; Australia, 1), 97; Greece, 19; Hungary, 1436; Italy, 170; Japan, 48; Mexico, 3; Monaco, 2; Norway, 2; Netherlands, 33; Portugal, 32; Roumania, 10; Russia, 288; Servia, 7; Spain, 67; Sweden, 5; Switzerland, 29; Turkey, 22; Uruguay, 3.

GOVERNMENT DELEGATES ADDRESS THE MEETING.

The speeches of the delegates of the various countries were pithy and to the point. Professor Uhtoff replied for Germany; Ritter von Huberler for Austria; Dr. F. W. Pavy for Greater Britain; Professor Bacelli for Italy; Professor Kitasato for Japan; Professor de Ott for Russia; Professor Zoeros Pasha for Turkey; Dr. J. H. Musser for the United States. Canada also had representatives on the platform, while France was represented by Professor Landouzy, who was given a hearty reception. His eloquent address in French, which was considered one of the great features of the opening, was as follows:

"To His Imperial, Royal and Apostolic Majesty we bring the very respectful homage of the French medical men. Coming from the native country of Bichat, Corvisart, Laennec, Dupuytren, Bonnet, Bretonneau, Claude Benard, Villemin, Pasteur and Curie, our delegation assembles here to offer to the country of Philippe-Ignace Sammelweis their cordial greetings and the collaborations from academies, universities, hospitals, physicians and medical societies from all parts of France.

Numerous are the reasons which have attracted so many colleagues to Transleithania. It is not only the renown of your thinkers, of your artists, of your scientists. It is not only the peaceful beauty and then the torrent force of your Danube, or the wealth of your Tisza, from whose banks flow your wines, which are of gold in color and in value. Nor were we attracted by the souvenirs and the monuments of your glorious city. We came to see what you show with justifiable pride: the palaces, the libraries, the schools, the museums, the institutions which you have consecrated to the worship of Arts, Sciences and Charity. You are proud, and rightly so, of your institutions for the relief

of the poor, for the spread of education and the spirit of human solidarity by which you desire that throughout Hungary the practice of medicine, having henceforth become as much the art of preventing as of curing illnesses of the mind and of the body, shall be exercised with more justice, so that, to promote the psychical and physical health of the people, there shall be a better distribution of material and moral well-being among individuals and collectivities.

"We know how greatly the rate of mortality and misery has been decreased in your capital. We know that the time is past where with you 'the seekers of beds' are legion. We know how healthful houses have replaced the old ruins where a whole population of agricultural workers lived crowded together, and how through the impelling power of Dr. Werkerle, President of the Council, the bright city women workers are going into the suburbs to live. We know how with you, as in all countries where sanitary politics is honored, your statesmen, the Andrasys, the Apornyis, the Kossuths, the de Daranyis unite with the medical men, who by reason of education are sanitarians, that morals may be made healthy, without which the laws for public safety remain as a dead letter.

"In this time of international struggle, where each civilized people work conquests other than those of warlike victories, we love to assemble together in incessant congress, curious of many things other than the equipment of the land and naval forces, even the aerial conquest, for which through envy to be foremost all the states of Europe run into debt; that of which we take care, we other doctors, is an international war against disease. What we visit with curiosity are the fortresses—the clinics and the laboratories, where one makes the assault on ignorance and misery. What we love are the arsenals and the equipments which kill epidemics, epizootics, epiphyties, which make disease and pain avoidable, old age endurable and death delayed. This is why we take part in your solemn international gatherings and why our illustrious colleagues, Professors Muller and Emile de Grosz, wish to have discussions as interesting and brilliant as those of previous reunions.

"That is why we have responded to your appeal to assist in the special advancement of medical science, each one coming to borrow from his neighbor that which promises to be most profitable to all. Your former President of the Cabinet, M. Coleman de Szell, by his patriotism and philanthropy, succeeded in having passed the law of 1901, and it is due to him and to the instruction of the minister, M. Jules Andrássy, that last year

legal protection was extended to over more than 36,000 infants.

"There is another struggle than that directed against the miseries, disgraces and loss of child life, of which we will study the mechanism with so much more interest since we know that lately you have entered upon the same contest, following the warm discourses in 1906 in the Senate chamber by our fellow-member Frederick de Koranyi—the struggle against tuberculosis. We know how, thanks to private philanthropy, to the state, to the solicitude of Count Andrassy and Leopold Edelsheim, Guylay, through the energy of Dr. Chyser, has entered into the struggle in the Kingdom against this disease. Hungary finds the dispensaries of the Calmette type the best weapon against tuberculosis.

"It is in a spirit of cordial scientific emulation that the French delegation respond numerously and earnestly to the invitation of the Committee. I surround as with a halo the reputation of your learned men and your ministers, who, I know, practise the thought of Disraeli—'The care of the public health is the first duty of a statesman.'

"To the wishes already so ardently expressed for the full success of our meeting, I have the very great honor of adding the wishes of France. May it please Minerva that by the Sixteenth International Medical Congress may be reflected on triumphant Budapest for the greatest benefit to humanity as much lustre as was known by the eighth International Congress of hygiene and demography, so marvellously organized by the illustrious J. Fodor and his colleague, Calman Muller, and presided over with so much authority by the eminent engineer, Hieronymi, then Minister of the Interior. Before this Congress, amid the other powerful debates and after learned discussions, was submitted to your judgment the communication of Emile Roux on the employment of anti-diphtheritic serum, which the pupils of Pasteur made in the Hospital for Sick Children at Paris. At Budapest, on the same day fifteen years ago, was gathered together the most distinguished hygienists, dermatographers and bacteriologists. So to-day the most eminent physicians meet. These are those attracted by the radiance of the science of medicine and the high culture and courtesy of the Magyars."

SECTIONS CONVENE. ENTERTAINMENTS.

On Monday, August 30th, at 9 a.m., the first session of all the sections of the Congress convened, and again at 3 p.m. A number of the delegates paid a visit at the same hour to the Apenta Springs. At 5 o'clock Professor Bacelli delivered a

lecture on "*Sulla introduzione dei Medicamenti croici entre le Vene.*" and at 9 o'clock in the evening the Lord Mayor of Budapest received the members of the Congress, including the ladies, at the City Hall. Champagne was served at 10 o'clock.

On Tuesday, the 31st of August, the session again opened at 9 a.m. and 3 p.m. Among the interesting side trips of the day were: an excursion to the city brewery, visit to the Apenta Springs, visit to the waterworks, and a visit to the Louis Francois champagne factory. The soiree given in the evening by the Hungarian ladies at the Royal Hungarian Museum was a success brilliant and unique. The tables were spread in the open air, and the charming Hungarian ladies, beautifully gowned, proved most capable in meeting all the requirements of hostesses.

On Wednesday the various sessions of the sections opened again promptly at 9 a.m. and 3 p.m., and those members who were tired of absorbing scientific work had an opportunity of visiting the champagne factory of Joseph Torley & Co. by special steamer on the Danube. A performance of Emerich Madach's "Tragedy of Man" was enacted at the National Theatre, where the acting was superb and the scenic effects long to be remembered.

RECEPTION AT THE COURT.

But the climax of social events at the meeting was the reception at Court, which was held at the royal palace by order of His Imperial Majesty, the Archduke Joseph receiving. About 1,500 invitations are said to have been issued. The official delegates were divided into groups according to the nationality, and each presented by Count Apponyi, supported by Count Zichy and the two Secretaries of State, together with Professor Grosz, the General Secretary of the Congress, and Professor Karoly Jassinger.

The Canadian delegates had the honor of an invitation to this reception. Among those present were: Dr. King, of Cranbrook, B.C.; Dr. Jasper Halpenny, of Winnipeg; Drs. Drake and Meek, of London; Dr. Casgrain, of Windsor; Drs. G. Sterling Ryerson, Primrose, H. A. Bruce, A. McPhedran and W. H. B. Aikins, of Toronto. The following delegates from Great Britain, the Dominion of Canada and Egypt were presented: F. W. Pavy (London), President of the English National Committee; G. F. Bashford (London); D'Arcy Power (London), Secretary of the English National Committee; Ruffer (Alexandria); William Grant MacPherson (London); A. McPhedran (Toronto), President Canadian National Committee;

G. S. Ryerson (Toronto), representing the military service of Canada; W. H. B. Aikins (Toronto), Secretary of the Canadian National Committee; Sir Benjamin Franklin (London); Sir Havelock Charles (London); Sir William Sinclair (Manchester); Sir Felix Semon (London).

The British delegation was received in audience at about 10 o'clock. Each member had the opportunity of conversing with the Archduke, who was most friendly in his expressions to those whom he received.

The usual work of the session was carried on on Thursday, the 2nd of September, and in addition provision was made for the visiting of the various hospitals of the city, both civil and military, as well as visits to many points of interest. At 8 o'clock the presidents of sections held receptions. Professor Grosz gave a large At Home at the Park Club, and Professor Baron de Koranyi entertained the members of the medical section at a most brilliant reception.

PROFESSOR LANDOUZY ENTERTAINS.

It was also the writer's good fortune to be entertained at a luncheon given by Professor Landouzy to the French delegation in the banquetting hall of the Grand Hotel Hungaria. Covers were laid for about 100, and the speakers, who used the French language, expressed towards the Hungarian nation feelings of greatest amity, and praised in no measured terms the magnificent organization of the Congress, the unbounded hospitalities of the people and the wit and beauty of the fascinating ladies of the Hungarian capital. Count Albert Apponyi, a distinguished aristocrat of the country, distinguished as an administrator, a linguist of note and an orator of power, replied eloquently to the moving toast proposed by the President of the French Committee.

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RECEPTION BY COUNT AND COUNTESS APPONYI.

In the evening one of the most brilliant and successful receptions was held. Count Apponyi and the Countess received 400 members and their ladies at the Park Club in the City Park. The guests included representatives of every nation—for the most part the official delegates and the representatives of the medical press. Among the Hungarian ministers and members of Parliament present were Counts Zichy, Toth, Molnar, von Bezeredi, Naray-Szabo, Thurn-Taxis, Fontenay and Boda. Another most interesting guest was the Cardinal, Graf Peter Bay,

whose literary achievements have secured for him a world-wide reputation.

MILITARY SECTION.

The XXth or Military section was one of the great successes of the Congress. Germany, France, Great Britain, Denmark, Italy, the United States and Canada (the latter by Colonel G. Sterling Ryerson) were officially represented. Dr. de Farkas entertained the foreign delegates at a splendid luncheon at the Nobles Club, an entertainment which was greatly enjoyed. Later in the week the Society of Military Surgeons of Budapest gave a magnificent banquet at the Military Club. It was a really grand affair in a superb setting.

CONGRESS TO MEET IN LONDON IN 1913.

The International Commission of the Congress accepted the invitation to hold the next Congress in 1913 in London. This was the first occasion on which the British Government had invited a scientific congress to assemble in London. The following despatches in answer to the invitation were forwarded:

To His Very Gracious Majesty Edward the Seventh, King of Great Britain and Ireland:

The Sixteenth International Congress of Medicine, held at Budapest under the august patronage of His Imperial and Apostolic Royal Majesty, has unanimously decided at its final sitting to accept the very courteous invitation of the Government of Your Majesty to hold its next session in Great Britain during the year 1913. The Congress humbly begs Your Very Gracious Majesty to bestow upon it your august patronage, and presents to Your Majesty its homage of profound respect and infinite gratitude.

CALMAN MULLER, President.

EMILE DE GROSZ, General Secretary.

The other despatch was addressed:

To the Secretary of State for Foreign Affairs, Whitehall, London:

SIR,—The Sixteenth International Congress of Medicine, held at Budapest under the august patronage of His Imperial and Apostolic Royal Majesty, has unanimously decided at its final sitting to accept the very courteous invitation of the Government of His Very Gracious Majesty, and will hold its next session in

Great Britain during the year 1913. The Congress begs you, Sir, to be so good as to accept this reply, and expresses in advance the warmest thanks for the hospitality it will receive in your country.

CALMAN MULLER, President.

EMILE DE GROSZ, General Secretary.

Dr. F. W. Pavy, of London, was named as the next President.

CLOSING CEREMONIES.

On Saturday the closing ceremony was held, the President of the Congress, Professor Muller, being in the chair. Various resolutions of thanks and appreciation were passed with great unanimity. The various nationalities were represented by official delegates, who gave expression to the general feeling of the different countries in declaring that Hungary had placed itself in the van of nations by the magnificent and successful Congress which had just been brought to a close.

Dr. F. W. Pavy, President-elect, was received enthusiastically, and emphasized especially the great success of this meeting from both the scientific and social sides. Dr. R. Blondel (Paris) spoke on behalf of the International Association of the Medical Press. The Mayor of Budapest expressed the satisfaction of the citizens at having had so many savants, including many of the most celebrated in the world, at present in Budapest. Count Apponyi, speaking on behalf of the Hungarian Government, said (*Lancet*) "He had prepared no speech, but he would take Professor Salamonsen's admirable phrase as his thesis, 'Merei, adieu, au revoir.' He thanked the members of the Congress especially for their display of scientific knowledge, and declared that the medical profession in Hungary would persevere under the light given them, and would maintain in their hearts the flame which had been kindled. With regard to the word 'adieu,' all that was elevated and good was of God, and he consigned them all to God's keeping. But how was he to say 'au revoir'? The Congress would meet again in London, where he had no business. His presence at the Budapest Congress was an accident. But if he could not see them again in person and in London, ideas and sentiments were always visible; by the work they would accomplish he would continue to see them, for his government would always study the humanitarian aspirations of the medical profession. 'We will never cease to see you, so I will say, 'Merei, adieu, et nous vous verrons toujours.' "

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The visiting ladies were delightfully and elaborately entertained by a special committee of cultured Hungarian ladies under the presidency of Madame de Bokay. To her and to the other members of this committee for courtesies so graciously extended our grateful appreciation.

In the *Revue de Hongrie* of the 15th of August, a copy of which was handed to each member of the Congress, there appeared an excellent article on "Souvenirs du Canada," par le comte Pierre Vay de Vaya. This article was spoken of and helped to bring Canada into prominence at this gathering.

The Canadian Committee have every reason to be pleased and gratified with the manner in which, as a committee and individually, they were entertained in the progressive and beautiful city of Budapest. The leading officers of the Congress expressed their pleasure in having so large a deputation from the Dominion. Count Apponyi in conversation showed that he was quite alive as to what was taking place in Canada. Professor Baron de Koranyi entertained some of the members of the Canadian delegation in a manner most charming. The Secretary-General, Professor Emile de Grosz, tried to anticipate the wants of the delegation and was at all times most helpful. To Professor Arpad Bokay, president of the section in therapeutics, we are also greatly indebted, as well as many other officials, and to Dr. Richard Kovacs for kind attentions, while Dr. Charles Jassinger, the Secretary of the Congress, one of the hardest worked officials, seemed to have always leisure to talk to his Canadian confreres, and was indefatigable in his efforts to advance their pleasure and interests. The writer cannot conclude this incomplete sketch of this most important, superbly organized, highly successful and enjoyable Congress without expressing his profound appreciation to Dr. Jassinger personally and on behalf of the Canadian Committee.

Medicine

GRAHAM CHAMBERS, R. J. DWYER, GOLDWIN HOWLAND, GEO. W. ROSS, WM. D. YOUNG.

The Serum Treatment of Epidemic Meningitis. FRANK SPOONER CHURCHILL, M.D. (*J. A. M. A.*, Sept. 11).

Reporting a series of 41 cases of meningitis treated by Flexner's serum, with 29 due to the diplococcus intracellularis, Churchill reports a mortality of 44%.

The course was frequently shortened by the serum, and crisis occurred in some cases. The general signs of the disease were lessened in severity, while the rigidity might remain.

Puncture of spinal canal gives a turbid fluid and smears show the bacillus, many being extracellular; while leucocytes are abundant. After treatment the leucocytes diminish, and frequently become more numerous in the mononuclear types, while the germs first become fewer in the free fluid and then disappear from the cells.

The serum must be given by intraspinal injection and about 30 c.c. removed before its insertion. It is best given every day or second day for the first few days, while further doses are determined by the clinical results and on the condition of the cerebro-spinal fluid.

G. W. H.

Myasthenia Gravis. IRVING SPEAR (*Maryland Med. Jour.*).

The case reported is that of a woman aged 48 who for three years had some difficulty and disability in swallowing and chewing, with an onset that resembled influenza.

Some drooping of eyelids and diplopia and general fatigue occurred, but would pass away again, and later dyspnoea and cardiac palpitation troubled her.

Notably there was present a much-enlarged thymus gland. The pulse was rapid, from 90—130. The patient died in the following year.

G. W. H.

Surgery

WALTER McKEOWN, HERBERT A. BRUCE, W. J. O. MALLOCH,
WALLACE A. SCOTT, GEORGE EWART WILSON.

Surgical Aspects of Cerebral Decompression. By CHAS. H. FRAZIER, M.D. (*Journal A. M. A.*, Sept. 11, 1909).

Before dealing with the subject proper the etiology of optic neuritis is considered. Frazier and his associates attempted an increase of the intracranial pressure by introducing a small rubber bag beneath the dura and filling the same with water at known pressures. Salt solution was also forced to mark the dura for the same purpose. In every experiment the pressure was increased up to a point where the respiratory function was arrested and it became necessary to resort to artificial respiration to restore the animal. In only one or two instances were any changes found in the disc, and then only to a very slight extent. They found, however, that if irritants like iodide or formaldehyde were also present the changes were more marked. But in no case was well-marked papilledema, comparable to that seen in man, present in the dog experiments. From these experiments it may be concluded that the real causes at work in the production of choked disc are not fully known, although it is most probable that increased tension has much to do with it.

Cerebral decompression is useful in cases of hydrocephalus and tumors. It is indicated in all cases, no matter whether the location of the tumor is known or not if vision is failing. Should the site of the tumor be diagnosed later it may then be operated on. In cases of inoperable tumor the decompression should be done for relief of headache and vomiting, which symptoms are alleviated in about two-thirds of the cases. Vision is greatly benefited in about the same percentage, but from the reports of the Johns Hopkins Hospital only 50% are benefited.

In cerebellar growths the decompression is done in the occipital region, while in cerebral neoplasms the temporal, and preferably the right side, is selected to obviate the palsies that have occurred in left temporal operations. The decompression operation has been recommended in certain quarters for intracranial trauma, but is condemned by Frazier.

G. E. W.

The Cancer Problem. By RICHARD WARD WESTBROOK, M.D., New York City.

Attention is called to the fact that the duodenum is very seldom the seat of malignant disease, while the stomach, which so closely resembles the duodenum anatomically, is so frequently affected with carcinoma. He points out that Cushing has shown that in health the duodenum contains much less germ life than the stomach and that it is often practically sterile. As the ilio caecal valve is approached the number of germs increases, reaching a maximum in the caecum and gradually falling off towards the rectum. From the knowledge that malignant disease is rare in the small intestine, he thinks there is a direct association between the bacteric and malignant disease, the former damaging the mucosa so as to allow the specific parasite to gain entrance. That carcinoma is not more common he thinks is due to the inhibitory effect of the pancreatic secretions.

Note.—While carcinoma largely preponderates in the large bowel, yet sarcoma is more common in the small intestine, so that Dr. Westbrook's contention would not hold.

G. E. W.

Psychiatry

W. C. HERRIMAN, ERNEST JONES.

Operation for Brain Tumor, with the Occurrence of Hitherto Unrecognized Circulatory Phenomena. ZENNER and KRAMER. *Med. Rec.*, Oct. 2, 1909. P. 651.

The patient, a salesman of fifty-seven, had for twelve years suffered from Jacksonian attacks, which began in the right leg. Soon after the onset these would often be replaced by general convulsive seizures, but for the past ten years they had been only Jacksonian in character. There had been a boring pain in the right parietal region which had not greatly troubled him. Slight weakness in the right limbs had been experienced for nine years, but until two months ago this had not prevented him from walking, writing and fulfilling all his duties. Several careful examinations made nine years ago were negative. A year ago slight hemiplegic signs could be detected, and these gradually got worse; at that time there was some sensory defect over the right foot, but the reflexes and special senses were normal. Two months ago this was more pronounced and had extended to the right arm; double optic neuritis had by now developed. An operation was performed in two stages and a dural endothelioma, weighing 165 grammes, was removed; on each occasion it was found that the radial pulse disappeared on the right side, to reappear after recovery from the anesthetic. The patient died five days after the second operation.

The authors call attention to the remarkable chronicity of the case, the slightness of the disturbance as contrasted with the size of the tumor, and the curious observation in regard to the pulse.

E. J.

Note on Early Symptoms and Diagnosis of Peripheral Neuritis.

R. T. WILLIAMSON. *The Med. Chronicle*, 1909. P. 357.

The writer calls attention to the occurrence of three symptoms that occur early in peripheral neuritis, before there is any muscular or sensory defect and before the knee-jerk is lost. These are: (1) muscular pain, (2) loss of the tendo achilles jerk, and, (3) loss

of the vibrating sensation. He summarises his remarks in the following sentences:

1. Loss of the tendo achilles jerk, and loss of the vibrating sensation are useful signs in the diagnosis between the early peripheral neuritis and functional affections, causing pain in the legs (pain due to acute illness, etc.), and would exclude the latter affections.

2. Loss of muscular pain on deep pressure would be a sign in favor of tabes, and the strongest evidence against peripheral neuritis in the differential diagnosis between the two affections at an early period.

3. Loss of the vibrating sensation would exclude acute anterior poliomyelitis of the adult in the diagnosis between this affection and peripheral neuritis.

E. J.

The Traumatic Neurosis and Babinski's Conception of Hysteria. TOM A. WILLIAMS. *Med. Rec.*, Oct. 2, 1909. P. 557.

This is yet another paper in which this fertile writer urges the importance of Babinski's view that suggestions, medical or other, play the predominating role in the creation of hysterical symptoms. In the case of railway accidents he maintains that it is not the physical or mental trauma that produces the patient's symptoms, but various suggestions on the subject, received by the patient both prior and subsequent to the accident.

E. J.

Intradural Tumor of the Mid-dorsal Cord. GRINKER. *Journ. of the Amer. Med. Assoc.*, Oct. 9, 1909. P. 1150.

The patient, a girl of twenty-three, had for a year suffered from girdle pains, more marked on the right side. Four months before operation her left leg got weak, and two days later the right; this rapidly progressed to complete paralysis. Three months later she was found on examination to have a spastic paraplegia, with exaggerated deep reflexes, etc., and complete loss of sensation below the fifth dorsal segment. A fibro-myxoma was removed by operation, and a month later her condition had greatly improved. She had obtained complete control over her sphincters, which had been quite paralyzed, sensation was perfect and she could use her legs at the sewing machine for several hours in succession.

The writer makes a number of interesting general remarks on the importance of early recognition of such cases, and on the error of treating doubtful spinal cases with anti-syphilitic remedies.

E. J.

Reviews

Immunity and Specific Therapy. By W. D. EMERY, King's College Hospital, London. London: H. K. Lewis.

Dr. Emery has given us a very timely book on a most interesting and important subject. Any one who has attempted to follow the literature of immunity and allied subjects, will thoroughly appreciate Dr. Emery's effort to correlate and summarize the vast amount of work that has been done by numerous observers in many countries. He has succeeded in his effort most admirably and we have not yet seen any book of moderate size which is at once so clear, so readable, and so concise. His first chapter entitled "Introductory and General," will repay perusal by every physician; he discusses in a general fashion the relation in immunity to disease. The next 300 pages are devoted to a consideration of the nature of toxins and the various anti-bodies of the blood and their relation to disease and to immunity. Erlich's chain theory is explained in a very lucid fashion. If one may criticize Dr. Emery's production in any way it would be that he devotes such a small portion of his book to the practical applications of specific therapy. Only 60 pages are concerned with this important advance in modern therapeutics; nevertheless, even this contains an interesting summary of vaccine therapy, and of the practical treatment, by specific method, of plague, anthrax, diphtheria, tetanus rabies, etc. We have the greatest pleasure in recommending it to advanced students, and especially to practitioners who desire to acquaint themselves with the recent advances, both theoretical and practical, in immunity and specific therapy.

G. W. R.

Selected Papers on Hysteria and Other Psychoneuroses. By PROFESSOR SIGMUND FREUD, Vienna. Authorized translation by DR. A. A. BRILL (*Journal of Nerv. and Ment. Dis. Monograph Series*, No. 4; 64 West 56th St., New York. \$2.00).

The appearance of this volume marks an event in the history of Anglo-Saxon psycho-pathology. It is the first of Professor Freud's writings to appear in English since a short article of his on Brain twenty-three years ago, and much water has flowed under the bridges since then. To a country still steeped in the empty dogmas of

Weir-Mitchellism it should come as a revelation of what the scientific study of psycho-pathology really means. In the past twenty years Freud has not only for the first time laid the basis of an actual and vital psychology, but has wrought it into an exact science to an extent that is difficult to believe could have been the work of one man. His penetrating dissection of motive, his profound study of the sources of conduct and character, and above all, his lofty ethical outlook, have quite revolutionised our conceptions of the human mind and its possibilities. The science of psycho-pathology he has put under a lasting debt to him, and has rescued from the ignorant superstitions and charlatanry with which others have striven to keep it clothed.

Freud's works in normal psychology took their origin in his extensive studies in the mind of the abnormal, where the deeper trends are from their exaggerated development easier to trace and define. The present volume contains a selection of ten articles on this subject, and relate to hysteria, the defense neuro-psychoses, and the anxiety neuroses (commonly called neurasthenia). More than a quarter of it is taken up with the question of psycho-therapy, and with a description of the psycho-analytic method which he has devised, and which gives such brilliant and gratifying results in the conditions that defy all other therapeutic measures. Two clinical cases are narrated at length, and many others shortly described.

Freud's methods and views have not remained fixed from their beginning, but have undergone a continuous progress and development. During this evolution points of view have been modified, errors in perspective corrected, and great refinements in technique achieved. Most of the present volume is confined to his earlier writings, of fifteen years ago, and so give little inkling of the results that have since then been obtained. There is, for instance, no mention of his masterly work on the significance of dream life and the technique of the interpretation of it, without a thorough knowledge of which no extensive psycho-analysis can be carried out. Those considerations in no way impair the value of the present volume, however, for the following reason. The easiest and best way of understanding Freud's work and methods is to follow the order of his own development, to begin at the beginning with his first articles and then gradually to trace the later development. The last two articles of this volume were written only recently, and the reader will doubtless experience the sense of a gap between them and the earlier ones which is to be explained by the considerations mentioned above.

Freud's work has been strangely neglected on this continent, where the only exposition of it is to be found in the writings of

Brill (*Journ. of Abnormal Psychol.*, Oct., 1908, *Amer. Journ. of Insanity*, July, 1909), and the present writer (*Montreal Med. Jour.*, Aug., 1909, *Journ. of Abnormal Psychol.*, Aug., 1909, *Amer. Journ. of Insanity*, Oct., 1909). It is to be anticipated that the appearance of this volume will give a much needed stimulus to careful study of the psycho-neuroses, and to extension of the knowledge of the valuable therapeutic weapon we possess in Freud's method. To all those who are in any way concerned with such questions—and what physician can fail to be?—the present volume is indispensable. It must, however, be again expressly stated that the knowledge obtained from it should be regarded, not as comprising a perfect whole, but only as furnishing a basis for the acquirement of later results, which we trust will also in good time be translated.

We must feel especially grateful to Dr. Brill for having so well performed the arduous task of translating these articles. He rightly states in his preface: "I feel quite certain that only those who have read the original will best appreciate the task of the translator." Freud is unquestionably a difficult author to read, and the task of the translator is greatly increased, not only by his having to render into English quite new ideas and modes of expression, but also by his having to coin new words with which to translate phrases that have been invented to express these ideas. This, in our opinion, Dr. Brill has done admirably well. These words will, no doubt, in the future be a constituent part of the neurological vocabulary, such are "repress" (*verdrängen*), "ab-react" (*abreagieren*), etc. It should be mentioned that a translator's preface gives a useful and clear account of the purport and subject of the papers.

E. J.

Chemistry—Catechism Series. Part II. Inorganic and Organic. New Edition. Revised and Enlarged. Price, One Shilling. Edinburgh: E. and S. Livingstone.

This is a small paper-bound book of some 73 pages. As shown by the title it is a catechism, giving question, then the answer immediately following. It will be helpful to students of this subject.

Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

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Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 203 Beverley St., Toronto, Canada

VOL. XXXIII.

TORONTO, NOVEMBER, 1909.

No. 5.

COMMENT FROM MONTH TO MONTH.

Ophthalmia Neonatorum. It is not long since we took occasion in these pages to urge upon the necessity of using prophylactics to diminish the number of cases of ophthalmia neonatorum. We urged that instructors of students and nurses should impress upon each his or her responsibility in the way of educating the public, as well as treating the individual patients. It has been estimated that the annual cost to maintain a blind person in a blind institution is between \$300 and \$400, and it is well known that a large proportion of patients in these institutions are blind because of the ravages of the gonococcus, so that it becomes a serious problem to the state which has to maintain these helpless individuals.

Of late, in England and in the United States, some medical men, aided in some cases by laymen, have taken up the matter of prevention, and have made marked progress towards initiating steps to diminish or prevent this scourge among babies. In Ontario, or, indeed, as far as we know, in Canada, nothing particular is being done.

The report of the Committee on Ophthalmia Neonatorum, presented to the American Medical Association in June last, furnishes

us with a lot of facts indicating the progress of this movement. In a large number of States, medical men have succeeded in having legislation bringing Ophthalmia Neonatorum within the jurisdiction of the Boards of Health. In fifteen States, failure to notify the Board of Health, or a qualified medical practitioner, by the midwife, parent, attendant or friend, of the occurrence of inflammation of the eyes in the infant, within six hours from its appearance, is punishable by fine, or imprisonment, or both. In Massachusetts and New York City, the Board of Health require the medical man to notify them immediately of the occurrence of the disease, and failure to do so is punishable by a fine of from \$50 to \$200. In New York City and Rhode Island, vials of silver solution, with dropper, and directions how to use, are provided free, and may be had at the diphtheria stations. In eleven States, birth certificates must be registered early, this time varying in different States from 36 hours to 10 days. In three States, enquiry is made on the birth certificate whether a prophylactic has been used, and in other States this step is about to be taken. In Illinois and New York City, lay committees have taken it upon themselves to publish, and distribute broadly, pamphlets discussing the disease, its cause and prevention. In England, a committee reported to the British Medical Association, and advised early registration of birth certificates; that Ophthalmia Neonatorum should be reported, and that midwives should be registered, and only after, among other qualifications, having shown evidences of proficiency in the use of prophylactic treatment.

Thus do we see that there is a wide-spread movement abroad, with accent on the abroad, to combat the ravages of the gonococcus, in so far as it affects the infant, and everywhere it is being instigated by medical men or medical societies.

So far as we know, nothing has been done in Canada except what each medical man makes a rule for himself. It is true that, in maternity wards, all precautions are taken to prevent the disease, and that students and nurses are taught to use silver solution or its equivalent as a routine measure; but unfortunately the teaching is not followed, and we are afraid that the number of ophthalmia cases is greater on that account.

W. H. L.

The Canadian Medical Protective Association has issued its eighth annual report in pamphlet form. It gives the list of officers and the executives of each province. Then follows the aims and objects of the Association, the constitution and minutes of the organization meeting, the amendments adopted at the Vancouver meeting of 1904, of the Halifax meeting of 1905, the proceedings of the Toronto meeting of 1906, of the Montreal meeting of 1907, of the Ottawa meeting of 1908 and of the last annual meeting at Winnipeg in August, 1909.

From the report of the President, Dr. R. W. Powell, Ottawa, who has been at the head of this institution since its inception, we learn that the Association has defended quite a number of cases all over Canada, and what is particularly gratifying in connection therewith is that not one case the Association has undertaken to defend has been lost.

From the solicitor's annual report we learn that during the past year not a single case has been brought to trial against a member of the Protective Association during the past year. Indeed, the solicitor says that he attributes this very largely to the fact—and we believe most particularly understood amongst that small class of pettifogging lawyers, who scurry after cases of this kind—that it is now well known the medical fraternity have such an organization at their backs and therefore cannot be intimidated by threats of an action for malpractice.

In looking over the table of membership one finds that the total is now 622; that the increase in 1909 over 1908 is 69; that the total increase in the last seven years has been 380. That is to say there are about one-tenth of the medical population of Canada members of the Protective Association. Taking these facts in conjunction with the statements of the solicitor for the Association, and comparing them, it would seem that this small body of the profession in Canada are practically ensuring the other members of the profession in the Dominion against these above-mentioned suits.

The annual subscription is \$3.00 per annum, and it seems inconceivable that many more do not seek membership in the Association. The Association now has a comfortable bank balance

of over \$4,000. To Dr. Powell is due a very great deal of praise and encouragement for the successful manner in which he has administered the affairs of this Association.

We would, again, earnestly exhort our readers to lose no time in having their names enrolled on the register of this Association, as \$3.00 is but a small annual premium to pay for such good protection.

Alcoholism is a subject ever interesting to the medical as to the lay mind. There was held in July last in London, England, the Twelfth International Congress on Alcoholism. At this Congress there were discussions on the effect of alcohol upon immunity, heredity, muscular and mental energy, its relation to tuberculosis, insanity and nervous diseases, as well as the advantages and disadvantages in its use in pneumonia and typhoid. It seemed to be the consensus of opinion that it was seldom of any distinct value in the treatment of disease. It was further brought out that even in moderate doses it had a tendency to lower resistance to infection, and that it had a baneful effect upon offspring. Dr. F. W. Mott dealt with the dangers of alcohol where there was any tendency to mental and nervous diseases. Alcohol has been generally set down as predisposing to tuberculosis, but this is not supported by a rather elaborate statistical study by Henscher, of Sweden.

That the use of alcohol in hospitals has within recent years greatly fallen away, almost the world over, is now pretty generally known.

Dr. Reid Hunt, Chief of the Division of Pharmacy, Hygienic Laboratory, Washington, was the official representative of the United States Government at this Congress, and presented a paper on the alcoholic beverages in the pharmacopœias of different countries, as well as on the use of wine in the preparation of mixtures. Only two pharmacopœias, Greece and the United States, include whiskey. In drawing attention to this fact Dr. Hunt pointed out undue prominence was given thereby to whiskey as a medicinal agent. Preparations of wine, also, in his opinion, are very undesirable and should be eliminated from all pharmacopœias.

The teaching of temperance in public schools, life insurance and temperance, the treatment of the inebriate, as well as the economic and legal aspects of alcohol, were discussed by prominent lawyers, the Lord Chief Justice, prominent railway officials, officers of the Army and Navy and others. One of the most prominent general discussions took place on "Alcohol and the efficiency of the national services." It was shown that there was an extraordinary growth in total abstinence in the British Army and Navy; in the army in India forty per cent. are total abstainers, no doubt due to improvements made in the environment of the soldier, particularly in housing and food.

The Congress was held under the auspices of the British Government, and pretty nearly all civilized countries were officially represented. The number in attendance was 1,400.

The Sterilization of Criminals and other defectives by vasectomy is the title of a leaflet published by the Chicago Society of Social Hygiene, founded under the auspices of the Chicago Medical Society. Prominent members of the medical profession, university men, judges, bishops and others are identified with this society, its aims and its objects. These are, plainly, the restriction of procreation of irresponsible parasites on society from such sources as natural criminals, imbeciles, insane and epileptics.

Amongst the few States that have taken any steps in this direction is notably Indiana, which some two years ago legalized vasectomy of these mentally defective classes. In this State alone over 800 confirmed criminals have thus been sterilized, 200 on their own request. Similar bills have been introduced in two or three other States. Five States (Minnesota, Connecticut, Kansas, Michigan and Ohio) forbid the marriage of feeble-minded, epileptic and insane women under the age of 45 years. Marriage is, however, not essential to procreation.

Unlike castration, it is urged in favor of the operation of vasectomy that it is trifling, without pain or danger or impairment of sexuality—it does not unsex the man. It effectually prevents pro-

creation and appeals to the bodies of the mentally defective rather than to their feeble minds.

Of the three methods proposed to deal with these unfortunates—castration, colonization and vasectomy—it may be said of the first that it is a major operation, renders the individual impotent, and would be difficult to secure legal sanction therefor; of the second, often suggested, it may be said it would most probably be a successful bar to propagation, but the constant care and trouble of keeping colonized would prove a difficult problem; of the third, vasectomy, it is an office operation, effectually blocks the vas deferens, does not lessen sexual power or pleasure, and completely sterilizes.

The *Journal of the American Medical Association* recently wrote this sterilization of criminals by vasectomy is becoming a live question in many directions. It has been officially recommended to general attention by the Chicago Medical Society, the Chicago Physicians' Club, the Southern District Medical Society and the Chicago Society of Social Hygiene.

A communication from the latter was presented before the Executive Council of the Canadian Medical Association in Winnipeg in August, which communication was ordered filed.

Murder and Other Criminal Trials have recently attracted considerable attention throughout the Province of Ontario, and there has been some rather caustic criticism made ament the administration of justice. As physicians very often figure prominently in these proceedings, and as they are very often called upon to give evidence as to fact or opinion, it may not be out of place to give expression to some ideas and opinions thereof in a medical journal.

These trials produce great "stuff" for the public press. Their columns teem with all the sordid details. The eager, avaricious public reach out for, yea demand, full and all particulars. Thus speak the newspapers. Is then the public mind diseased? Or is the editorial mind soft, pliable and easily molded?

Standing out conspicuously in all these trials are the prisoner at the bar, the judge, jury, counsel for the prosecution and counsel for the defence. Oftentimes a witness is projected prominently forward; sometimes it is on the evidence of the medical man the case hinges. He then stands forth in the limelight. Often, probably too often, either counsel is the predominating figure in the whole case.

A man is adjudged by a jury of his peers. They arrive at their findings by the evidence submitted. But counsels are privileged to address juries. These counsels have well-trained logical and legal minds. In intelligence and learning they predominate the minds of jurymen taken from the common, every-day walks of life. Their personality is the stronger—so it is not an uncommon expression to hear “He is a great man with a jury.” British justice prides itself on fair play. Is this fair play to a prisoner at the bar?

To a bystander looking on calmly at our courts of justice there would seem to be far too much scope for forensic eloquence on the part of counsel. The jury should be left with the evidence.

News Items

DR. ALLAN C. RANKIN, Montreal, has sailed for Europe.

DR. L. J. LAMULEN, M.B.A., for Gaspé is to be appointed Sheriff of Montreal.

DR. W. H. WRIGHT, formerly of Tottenham Ont., has settled in Weston.

DR. G. A. KENNEDY, McLeod Alta., will go abroad for the benefit of his health.

DR. PHILIP, of Edinburgh, Scotland, who has been on a visit to Montreal, has returned home.

TYPHOID fever is abating in Montreal, for the week ending the 31st October, there were only thirty-seven cases reported.

DRS. THOMAS WALKER, St. John, N.B., and R. S. McNeil, Charlottetown, P.E.I., were in Toronto the early part of October.

ST. JOHN, N.B., is considering the advisability of having a duly qualified medical practitioner for medical inspector of its schools.

INFANTILE paralysis is said to be about epidemic in Montreal. A discussion on treatment of the disease was recently held at a meeting of the Medico-Chirurgical Society.

DR. CHARLES SHEARD, Toronto, Medical Health Officer, has returned from Richmond, Va., where he was in attendance at the annual meeting of the American Public Health Association.

DR. P. H. BRYCE, chief medical officer of the Department, at Ottawa, inspected Andover, N.B., where a typhoid fever epidemic was raging, and from there went on and attended the annual meeting of the American Public Health Association at Richmond, Va.

DR. FRED. HAZLEWOOD, Toronto, is in charge of the Riverdale Hospital, same city.

DR. R. G. McDONALD, Sarnia, Ont., has gone abroad for a few months. Dr. J. A. Bell is taking his practice in his absence.

AN X-ray apparatus is to be installed in the Royal Jubilee Hospital, Victoria, B.C., through the generosity of the Country Club of that city.

MCGILL UNIVERSITY had a deficit last year amounting to \$50,842, and the governors are considering the advisability of increasing the tuition dues.

MAURICE H. RICHARDSON, Boston, is to deliver an address before the Academy of Medicine, Toronto, on the evening of the 7th of December.

THE Southern Alberta Medical Association, at its recent meeting, passed a resolution favoring the principle of Dominion Registration.

REPRESENTATIVES of the four Western Provinces' medical councils met in Banff the latter part of September. Another meeting will be held in the near future as to uniting the medical men through interprovincial reciprocity.

DR. ROBICK has called his meeting for the 16th of October in the Windsor Hotel, Montreal. The following have been appointed to act on this committee by their medical councils: Ontario, Dr. William Spankie, Kingston; Quebec, Dr. L. P. Normand, Three Rivers, and Dr. Art Simard, Quebec City; Nova Scotia, Dr. Geo. L. Sinclair, Halifax.

THE President of the American Gynecological Society has appointed a committee, to report at the next annual meeting, in Washington, on the "Present Status of Obstetrical Teaching in Europe and America," and to recommend improvements in the scope and character of the teaching of obstetrics in America. The committee consists of the professors of obstetrics in Columbia Uni-

versity, University of Pennsylvania, Harvard, Jefferson Medical College, Johns Hopkins University, Cornell University and the University of Chicago. Communications from anyone interested in the subject will be gladly received by the chairman of the committee Dr B. C. Hirst, 1821 Spruce Street, Philadelphia, Pa.

CANADIAN MEDICAL ASSOCIATION. The Executive Council of the Canadian Medical Association met in Toronto in special session on the 11th of October, and appointed the following Special Committee on Dominion Registration: British Columbia, Drs. S. J. Tunstall, Vancouver, and J. King, Cranbrook; Alberta, Drs. G. A. Kennedy, McLeod, and J. D. Lafferty, Calgary; Saskatchewan, Drs. M. M. Seymour and W. A. Thompson, Regina; Manitoba, Drs. R. J. Blanchard and R. S. Thornton, Winnipeg and Deloraine; Ontario, Drs. F. N. G. Starr, Toronto, and R. W. Powell, Ottawa; Quebec, Drs. E. P. Lachapelle, Montreal, and H. S. Birkett, Montreal; New Brunswick, Drs. Murray MacLaren and J. W. Daniel, St. John; Nova Scotia, Drs. John Stewart and George M. Campbell, Halifax; Prince Edward Island, Drs. S. R. Jenkins and James Warburton.

Publishers' Department

THERE is a large class of post-nasal, pharyngeal and throat affections due just now, and we do not know of any appliance quite so well adapted for treating cases of this description as the Nebulizers and Compressed Air Apparatus put out by the Globe Manufacturing Co., of the famed "health town" of Battle Creek, Mich. Medicated vapor applied "on the spot" is the keynote of the Globe treatments.—even to applying the vapor to the middle ear when necessary.—under proper pressure, and with vibratory impulses designed to manipulate the mucous membrane of the remotest parts of the air tract. With convenient air supply—apparatus for which this Company also supplies—this method is held by a large and growing number of physicians to be very satisfactory—in fact, unapproached by any other non-surgical method. Their catalogues and formularies supplied on request.

THE Canadian Medical Exchange, conducted by Dr. Hamill, Medical Broker, King and Yonge Streets, wishes us to announce that at the present time he has a very desirable list of registered buyers who are seeking locations to practise medicine, and that he is in a position to dispose of any medical practices and property which are inviting. All prospective buyers are bound legally and morally against publicity, piracy or offering opposition if they do not buy. The Doctor would be glad to give details of his plan of negotiations to any intending vendors. For fifteen years the Medical Exchange has been buying and selling medical practices along lines which have been entirely satisfactory to the profession.

THE TEST OF TIME.—Oscar F. Baerens, M.D., Ph.G., Professor of Diseases of the Ear, Nose and Throat, St. Louis College of Physicians and Surgeons, St. Louis, Mo., says: "In Glyco-Thymoline I have found a preparation upon which the body medical has placed the seal of approval, and one calculated to meet the requirements of the medical practitioner's varied needs. The preparation is too well known by reason of its world-wide (I use this term advisedly) use to necessitate or warrant a description or analysis here, nor do I propose to speak for others beside myself. It is, however, a pleasure to state that for the past eight years I have used this preparation to the exclusion of all others in my work

at the clinic and in private practice whenever I wanted a mild, cleansing, antiseptic, detergent remedy. During the period of time I have a large number of cases on record which I could detail would space permit, but I must desist and limit myself to a few which I will offer to show why I confine myself to this single remedy, and leave it to the reader to determine the value of my judgment.

"Mr. G. C. H., age 37, traveling salesman, consulted me in reference to his 'catarrh,' which had given him much discomfort for some time. Complained of frequent attacks of headache, occasional sore throat, and incidentally mentioned the fact that his sense of smell was failing him. I examined his nose carefully and found him in the first stage of beginning atrophic rhinitis. The tissues looked dry and drawn, there were some crusts which were very adherent and had some odor. When detached, which was with difficulty, the mucous membrane showed a tendency to bleed. I spent some time in rendering the affected parts perfectly clean, using a solution of Glyco-Thymoline and water, equal parts, warmed to proper temperature. He was further instructed in the use of the K. & O. Nasal Douche, which he continued to use daily. I gave him general instructions as to his habits, diet, way of living, and he left me. Saw him several months later while passing through the city, and he came up to the office and I looked him over again. To my great surprise the atrophy had been unmistakably arrested in its progress, his throat was normal, he not being obliged to hawk so incessantly any more, and his sense of smell had returned completely. Here is a case which was entirely restored by the conscientious and diligent use of Glyco-Thymoline.

"Fred H. K., age 26, vocalist, came to me complaining of his throat, which troubled him considerably in his work. Stated that he had received treatment from three or four physicians without receiving any benefit. Said previous treatment consisted in cauterizing the tonsils; throat no better for all this. Upon examination found nose normal and pharynx in fair condition, and in the face of all I had learned from previous treatment was puzzled for a few moments. Completing my examination with the small mirror passed up behind the soft palate, I noticed a deep ulcer high up in the naso-pharynx, completely hidden from view by the velum palati. Everything at once became clear to me. Time and again I succeeded in getting results when others failed because I took the trouble to inspect the naso-pharynx, a cavity very much neglected. There was only one thing to do and one way to do it. Glyco-Thymoline was ordered to be used with equal parts of warm water.

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as a douche for the nose. Patient readily learned the trick of closing up the cavity and allowing the medicament to remain in contact with the diseased parts for quite a while. In two weeks this patient was well of a trouble which threatened to cause him to abandon his vocal work, and which had caused him considerable expense, pain and loss of time. I number him among my most grateful patients."

Two Interesting Cases Dr. Geo. Selkirk Jones, Ph.D., L.S.A., in an original article, first printed in *Medical Reprints*, London, says: "I am desirous of placing upon record the two following clinical cases, which have come within the sphere of my professional occupation. The first was that of a lady, the subject of a periodically recurring hemicrania of a decidedly neurotic type, upon whom the usual remedies had (*ad nauseam*) been tried, with occasional benefit alternated with disappointment. This led me to persevere with Antikamnia tablets, one every two hours for eight doses. This case having secured for me a meed of confidence, I have labelled it, mentally, as my first success with this preparation. The second one is that of a man aged forty-five, the subject of asthma of a pulmonary type, and associated with gastric troubles, for whom I was in the habit of prescribing alkalies. In this case I am now observing the gradually increasing evidences of the benefit of Antikamnia and Codeine tablets, which, up to the time of writing, have not failed or fluctuated in their analgesic and stimulating action upon my patient's asthmatic condition."

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXXIII.

TORONTO, DECEMBER, 1909.

No. 6.

Original Articles

A CASE OF HEMORRHAGIC PNEUMOCOCCUS SEPTICEMIA.

By H. B. ANDERSON, M.D., F.R.C.P. (LOND.); M.R.C.S. (ENG.)

Associate Professor of Clinical Medicine, University of Toronto.

J. H. F., aged 58; Canadian; physician. Had always been of robust health, not having been ill since he had had measles in childhood. Had been somewhat out of sorts for a few months preceding his final illness, and the week previous had suffered from a mild attack of influenza. He had recovered from this, however, and had resumed his professional duties for a few days.

On Tuesday night, February 4th, after a rather hard day's work during which he had a fatiguing walk through the deep snow, he was taken with a severe chill, and on Wednesday morning his temperature was 102. He complained of pains throughout the body and in the eye balls, and felt generally miserable. On Wednesday evening his temperature was 101. He passed a very good night, and on Thursday morning felt much better, temperature being 99 degrees. Having some urgent calls, he went out and attended to a fairly heavy day's work. Towards night he did not feel so well. He had another severe chill. The temperature rising to 103 degrees, and towards morning to 104 degrees. During Thursday night he developed somewhat painful and tender areas about the first metatarso-phalangeal joint of the right foot, in the left thigh just above the inner and front aspect of the knee, and on the extensor aspect of the right arm, just below the elbow. Suspecting rheumatic trouble, he dosed himself freely with salicylates. The parts became swollen and brawny. During Friday the temperature ranged from 104 degrees in the morning, 103 degrees in the afternoon and 101 degrees in the evening; pulse 100 degrees in the morning and 92 degrees in the evening. I saw him for the first time with Dr. Dawson on Friday at 4 p.m. His face had a

very anxious expression, and he was suffering from the most distressing restlessness. There was marked swelling, stiffness and slight tenderness to the inner side of the left thigh and leg, and on the extensor aspect of the right arm and forearm, in both situations extending well above and below the joints. There was a slight bluish discoloration appearing through the skin of the affected part of the arm and forearm. The joints were not involved. Examination of the heart disclosed nothing abnormal, the apex being in its normal situation and the sounds clear. Distinct pleural crepitation, however, was discovered at the lower part of the right chest posteriorly. The patient had no cough nor expectoration nor were the respirations accelerated. On questioning him, he remembered having had a severe pain in the lower part of the right chest on Friday morning, but of only brief duration. The pulse was not rapid, was quite full, but compressible, with an occasional much weaker beat. The pain and tenderness in the swollen areas increased, but was not extreme. The restlessness and apprehensiveness being the most unbearable symptoms, so much so that morph. grain $\frac{1}{4}$, was given, with some temporary relief. He passed a restless night, and on Sunday morning his whole condition had become most alarming—pulse, small, rapid and feeble—at times almost imperceptible; the features pinched; surface of body covered with cold clammy perspiration; an ashy bluish tint to the skin; the swollen areas in the thigh and leg had extended nearly to the hip and ankle; that of the arm nearly to the axilla and middle of the forearm, and these were of a purplish black color, with a somewhat reddened margin in places. Blood examination revealed no leucocytosis, as smear from the reddened, swollen margin of the involved area back of the right elbow showed large numbers of diplococci in pairs, or in chains of two or three pairs surrounded by a distinct capsule. In morphology these corresponded to the pneumococcus. Cultures on plain and glycerine agar, blood serum, bouillon and bouillon serum were made from fluid withdrawn from the edge of the hemorrhagic area by Dr. R. W. Mann, pure cultures of an organism responding to all the usual tests for the pneumococcus being obtained.

The patient grew rapidly worse and died at 4.30 p.m. on Saturday, retaining consciousness until a few minutes before death.

The case presents a few points of unusual practical interest to the clinician.

It is an illustration of the view now generally accepted that general infections by the pneumococcus may occur with or without subsequent localization in other organs or tissues. Even in ordin-

ary acute lobar pneumonia there may be primarily a systemic blood infection, the pneumococcus being found in the blood before the appearance of any evidence of local pulmonary involvement, Prochaska finding pneumococcus in the blood of all of fifty cases and Rosenow in 160 out of 175 cases examined. (Osler's system, vol. ii, page 556). This view gives us a much wider conception of the pathology of pneumonia regarding it as a systemic disease with local manifestations in the lung rather than as a pulmonary disease.

The case also illustrates the clinical fact that the most virulent infections are characterized by slight local manifestations as is the case in the fulminant, black or hemorrhagic type of diseases in general.

A question of even more immediate practical interest is what relationship did the fatal septicemic condition bear to the attack of influenza of the previous week, and what influence did the exposure to fatigue and cold on Tuesday and Thursday have in reducing the systemic resistance so as to allow of the general invasion.

The influence of cold, exposure and fatigue as factors in the mortality of animals after inoculation experiments with the pneumococcus as well as other pathogenic organisms, is well established. The many factors entering into the complex problem of systemic resistance and immunity are still but poorly understood, but sufficient has been established to prove that these factors are subject to rapid and wide variations under the influence of our surroundings. The investigations of Wright and his associates are valuable in this connection. The variations in the opsonic index pointing to fluctuations which may occur in at least one of the factors related to immunity. While no certain evidence is at hand, one cannot help but feel that the aggravation of symptoms following the fatigue and exposure of Tuesday and Thursday so lowered the systemic resistance as to have allowed the invasion by overwhelming numbers of bacteria, against which under more favorable circumstances the body might have coped. If we remember that there is no sharp line between local and general infections, that whether a staphylococcus infection will remain a boil or produce a fatal septicemia is a matter of degree of virulency of the germ and systemic resistance, factors subject to ready alteration, we will appreciate the practical importance of the careful early treatment of all infections.

This necessity becomes more urgent in the apparently trivial infections of patients in advancing years, in those with broken

constitutions or suffering from arterio-sclerosis, chronic diseases of the heart, kidneys, liver, etc., or in the various cachexias—conditions wherein a lowering of systemic resistance has been experimentally demonstrated by a progressive lessening of the germicidal action of the blood.

ALCOHOLISM A SYMPTOM OF CONSTITUTIONAL PSYCHO-NEUROSIS.

BY DR. SERGE SOUKHANOFF.*

In speaking of alcoholism as one of the symptoms of "Constitutional Psycho-neurosis," it is necessary first of all to explain what is to be understood by this term. It designates some definite psychic states, for the most part congenital, which characterize certain anomalies of the psychic activity. These anomalies in the definite groups of constitutional psycho-neuroses are neither isolated nor of rare occurrence, but in certain associations they appear fixed. Thus each group of this sort has its own characteristics, psychologic or psychopathic. In such cases one used to speak of degeneracy, of its different symptoms; in very vivid clinical descriptions given by numerous authors, appeared the complete classification of the abnormal states, whether constitutional or congenital. We have now a mass of material in which the analysis of isolated symptoms has been carried to the extreme. Of late years these synthetic tendencies have influenced the works of alienists in a very marked manner. Thus, Kraepelin has elaborated the Manic Depressive psychosis and Dementia Præcox; for the constitutional states there exists an interpretation of *psychasthenia*, based on the works of Pierre Janet. He has found a more definite place for the great group formed of what was formerly described under the name of "stigmata of psychic degeneration." The term "degeneration" has become too vague, and we must admit, with Raymond, that the words, "degeneration," "degenerate," "degenerative," define more an anthropological than a clinical character. After the period of the analysis of these degenerative phenomena which manifest themselves in the psychic

* *L'Alcoolisme, Symptôme des Psycho-neuroses Constitutionnelles*, par SERGE SOUKHANOFF, médecin en chef de l'hôpital de N. D. des affligés, à Saint-Petersbourg. *Revue de Psychiatrie*, July, 1909. Translated by E. Day, Clinical Assistant, Hospital for Insane, Toronto.

sphere, comes the period of their synthesis, of the assembling of individual symptoms. Their isolated description, although very cleverly given, and their mere classification were not enough to promote progress in the study of degeneracies.

Now, appeared the necessity of a more simple, more real classification of all the psychic anomalies of symptomatic character observed in constitutional psychic states, and which are to be found according to certain combinations, in the life of each individual presenting a picture of each of the neuroses. There, where the pathological traits appear in a very marked and definite manner, is formed a group of different psychopathic personalities; but the cases where, on the contrary, these traits are not very evident and exert a feeble influence over the conduct of the subject, not attaining great intensity in their external manifestations, these cases characterize an enormous group of persons of whom cannot say they are either perfectly healthy or suffering from any definite malady. "Nature does not go by leaps"; we have a whole series of transitional steps from what we call normal and healthy to what may be counted as disease.

From the clinical and biological point of view, one could suppose, *a priori*, that the types with which we meet in the field of pathology have their analogies among the healthy, and among the latter pathological traits are often found, in either a latent or a rudimentary condition. So, from this point of view, what we call normal character; by virtue of a whole series of transitional forms, borders on the region of pathological character. The observation of individuals, emphasizing the traits of different pathological characters, gives material not only for psycho-pathology, but also for the more detailed and perhaps wider understanding and explanation of the psychological characteristics of the most different human individuals.

As the study of maladies of the memory or maladies of the will helps us in a very definite fashion to understand the real nature of these mental capacities, so the knowledge of pathological individuals, and their way of looking at things, as compared with fact, gives very valuable material for getting an accurate representation of normal characters. And this is very natural, since Nature knows neither normal nor sickness, and since these differences are artificial, doubtless, and created by us to make practical action easier.

So there is nothing astonishing nor unexpected in the absence of marked limits between normal characters and pathological characters, which constitute the different psycho-neuroses, since neuro-psychic activity appears as an evolved function. It is sub-

ject to oscillations, and is changeable in its development in a series of generations, and even in a particular individual. It is then comprehensible that, on the foundation of normal characters, rise certain traits considered as pathological, and that pathological characters should have their analogies amongst sane persons.

The point of view that I have just explained, the clinico-biological point of view of normal and pathological characters, is perfectly applicable to the subjects who use strong drink to excess. It is interesting to consider alcoholics, not from their external manifestations, but in their individual psychology; because their division into occasional alcoholics, chronic alcoholics and dipsomaniacs is purely symptomatic, without any real basis.

One of the most widespread of the congenital constitutional neuro-psychic organizations is psychasthenia, which when it is feebly expressed shows itself in the form of an over-conscientious or anxious nature. Here we observe a whole series of associations of certain pathological peculiarities, giving a definite psychic picture. One sees in the individual an inclination towards over-conscientiousness and uneasiness, sometimes without cause; a tendency to indecision, doubt and hesitation; but these peculiarities of character are under the influence of characteristic variations, not only with different individuals, but even with a single subject having a scrupulous and anxious character. The moral qualities are developed not only to an ordinary degree, but usually to a very high degree. Persons of this class, if the scrupulous and anxious traits of character increase or become more acute, manifest a tendency to obsessions, and the character appears as a psychological basis of obsessions. Without this character, obsessions do not exist; but this character may exist without obsessions; they are phenomena of the same class, differing only in degree. Psychasthenia, in the meaning of Pierre Janet, into the symptomatology of which enter all the obsessions described by many authors in so detailed and perfect a manner, shows itself in persons having an over-conscientious and anxious character. One of these states belongs to the field of pathology, the second lies nearer the normal.

By more detailed investigation of alcoholics, by closer acquaintance with the congenital peculiarities of their character, I am convinced that amongst them there are many presenting manifestations of this character, with psychasthenic traits (in the broadest sense of the term). It is interesting to note that in the most marked manifestations of psychasthenia, where a clear picture of obsessions in the subject is found, ordinarily alcoholism is not noted, and as if, in such cases, the existence of painful manifestations of this psycho-neurosis assured them against the use of

alcohol, alcoholism manifests itself principally, but not exclusively, in the milder degrees of psychasthenia. Psychasthenics, if they are not accustomed to alcohol, easily become intoxicated. This can be explained partly by the fact that people of this category are prone to depressive emotions. Psychasthenic alcoholics begin to drink early, usually under the influence of their surroundings, by imitation, from bravado, etc.; at first they do not like alcohol, and strong drinks even disgust them. Trying to imitate others, accepting the invitation of companions, the psychasthenic youth, often alcoholic, gradually becomes accustomed to spirits, etc., although not without difficulty; he commences the abuse of alcohol after a period of effort. At first there is not, in a majority of cases, at least, a spontaneous craving for these drinks. The horror of his condition in the psychasthenic youth plays the leading part in his subsequent alcoholism. He continues to return to spirituous liquors. The individual feels that they dispel in him disagreeable feelings, that they calm his scruples and anxiety, that they flow like a stimulant and submerge his psychasthenia, which is explained subjectively by the lowering of psychological *tonus*. Strong drink gives him temporarily a little confidence which he lacks, and exerts a tonic influence on the manifestations of psychic energy. And thus, in such a subject, little by little, an instinctive impulse toward alcohol begins, growing steadily, and finally attaining to morbid manifestations; soon disagreeable emotions, to which the psychasthenic above all is susceptible, and which with him tend to persist, become the excuse for consuming larger quantities of alcohol. This occurs oftener and oftener; if at first such an individual drank occasionally, the intervals become shorter; gradually the picture of chronic alcoholism supervenes. The moral sense, the voice of reason, remorse of conscience, all remain long in the psychasthenic alcoholic, and if all that cannot of itself exert an inhibitory influence over habit already formed and rooted, if with such an individual nothing happens that can incline his higher mental capacities toward the struggle against his pernicious habit, then alcoholism develops further. But in quite a number of cases there is a certain change which reacts on the external manifestation of alcoholism. This change is such that, out of the condition of almost incessant alcoholism, where exacerbations under the influence of moral derangements formerly appeared, oscillations commence to be noted, apparently without any definite reason. It sometimes seems that the alcoholic psychasthenic is more given to drink at certain times than at others; sometimes the degree of use of spirituous liquors and the strength of the tendency diminish, and these oscillations become more and more marked. After the ex-

cesses, the subject for some time stops using alcohol, later returning to it as an accustomed stimulant.

Sooner or later in this case, in the transitional period of oscillations of a psychasthenic, the stage is reached of a more definite rotation; that is to say, the syndrome called *dipsomania* appears. Thus certain psychasthenics go from occasional alcoholics, pass the stage of chronic alcoholism, and reach the condition of dipsomania. The prodromal period of this last affection is of some duration, and that is quite in harmony with the fact that psychasthenics come to consult physicians for their dipsomaniac symptoms at the adult age of thirty to thirty-five years, and this transition from one form of alcoholism to another indicates clearly the lack of foundation for the classification of alcoholics on the basis of external phenomena, and according to symptomatic manifestations.

I give here a general *outline*, without individual peculiarities, the history of alcoholism, manifesting itself in psychasthenics, and persisting sometimes to dipsomania. The cross-examination of the subject himself, the analysis of his psychic make-up, the exact knowledge of his alcoholic history, have all convinced me the more that dipsomania in such cases develops in a quite definite fashion. Often I have tested this conclusion in isolated cases, this idea of the transformation of chronic alcoholism into dipsomania being open to test and verification.

Dipsomania in psychasthenics does not present a hopeless prognosis; sometimes it yields to the voice of reason and to psychotherapy. In this way the recovery from dipsomania under the influence of some startling event in the life of such an individual is explained.

The alcoholic psychasthenics of whom we have just spoken, as if predisposed to emotional depression, often show the phenomena of intoxication intensified by alcohol; and that shows itself in the phenomena of delirium tremens, sometimes typical and intense, sometimes of short duration and mild. It is curious to note that in the cases where, under the influence of alcohol, auditory hallucinations develop in the psychasthenic, nearly always in the storm of hallucinations there exists a tendency toward their association by contrast. This association of the psychic process by contrast seems to be peculiar to the psychasthenic state.

Such is in general the symptomatology of alcoholism, allied to a neurosis or rather a psycho-neurosis, whose psychological basis depends on the over-conscientious and uneasy disposition, which, in its matured form, gives the varied picture of the obsessing psychic state.

Doubtless, it must be added, the natures of the prolonged intoxication by strong drink become intermingled more and more with the fundamental psychasthenic state.

Another very widespread organization is pathological reasoning; the persons whom it characterizes are animated and brilliant conversationalists, but at the same time their judgments often bear the mark of superficial and paradoxical conclusions. Their emotional condition is on the whole exaggerated; they are high in their own esteem, take offence easily, often they are not unpleasant and are even cordial; the individuals in question, as opposed to psychasthenics, are not given to over-conscientiousness nor scrupulousness; as a rule they are self-confident. They are inclined toward egotism and even to paranoid manifestations. One is often struck by a superficial mental brilliancy, which sometimes masks the absence of depth of ideation and of thought. It is interesting to establish that, along with the mental qualities indicated, there exists on the whole a lower moral sense, varying greatly in each individual case. The less developed forms are less marked, and border on the normal, where pathological phenomena, strictly speaking, are not found. On the other hand, the accumulation of pathological traits gives the picture not only of a psycho-neurosis, but of a psychosis in the true sense of the word. When on the field of pathological reasoning, the phenomena of excitement appear, they take the form of "reasoning insanity," giving the types of psychopathic inventors, the persecuted, the querulous or erotomaniaes. Sometimes in this case the moral sense is more dulled than the purely intellectual, when the affection formerly known as an idiopathic affection, *moral insanity*, appears. As in the psychasthenic, so in the reasoning type, there exists a whole series of transitional steps from health to the most morbid phenomena.

On the subject of alcoholism, considered as a symptom of the reasoning psychoses, it must be said first of all that in the obviously insane states alcoholism is seldom observed. Generally alcoholism shows itself in the milder forms, where moral defects are prominent. *Reasoning alcoholics* may commence to drink young; ordinarily, alcohol, even when they first use it, gives them pleasure. This circumstance leads them to return to alcohol, not for the necessary stimulant to keep up their mental activity, which they do not need, but as the source of pleasure and agreeable distraction toward which they are much inclined. Hence the "reasoner" quickly becomes an alcoholic, and his under-developed moral sense becomes still more feeble. It seems to me that in the case of street drunkards (half-clad, begging, living from hand to mouth, daunted by nothing, happy-go-lucky), individuals belonging to the class

of "reasoners" might be found. Weakness of the moral sense, combined with alcoholism, becomes the cause in these cases of crimes of different sorts. These cases of alcoholism in connection with pathological reasoning, where the moral sense is weak, and where there is insufficient self-control, have a bad prognosis. Psychotherapy is often fruitless.

Let us pass to a new group of psychopathies—the epileptics. I shall refer to the epileptic forms where pathological traits are prominent, and where seizures are rare and do not lead to profound dementia. Epileptics, as observation and legal practice show, are often users of alcohol; it must be noted that sometimes this fact reveals latent forms of epilepsy, where the friends may have no knowledge of epileptic seizures. Persons in this category having once made the acquaintance of alcohol have a perfect passion for it. Under the influence of alcohol the morality of such an individual degenerates still further, and it is then that a whole series of very marked psychopathic manifestations appears—*delirium tremens*, with profound dulling of consciousness, preceded by an epileptic seizure; the state of psychic automatism; periods of excitement, sometimes brief, sometimes quite long, with almost complete amnesia, etc. All this brings these persons eventually to a hospital or a jail.

Finally, a few words with reference to alcoholism as a symptom of the hysterical neurosis, which is oftener met with in women than in men. In the serious forms of hysteria, for some reason, there does not seem to be a strong tendency towards spirits, though this tendency may be present in the milder forms of hysteria; there alcoholism is subject to great variation, depending on the emotional state and a host of circumstances, whims, etc. With many hysterical people, spirits do not seem to give much pleasure, and they seldom become addicted to them. Hysterical persons prefer alcoholic drinks having a pleasant taste. The consequences of drinking wine, the subjective sensations following its use, protect such a one sufficiently from developing alcoholism. Hysterical people are more prone to become addicted to other narcotics than to alcohol.

Such is in general terms the symptomatology of alcoholism in the four constitutional psycho-neuroses—psychasthenia, pathological reasoning, epilepsy and hysteria. It is to be understood that alcoholism may be a symptom of other psychopathic states (manic depressive insanity, dementia præcox, paresis, etc.), but that does not enter into the present discussion. I should like to draw attention to the psychology of the alcoholics with whom one comes in contact, and point out the inadequacy of the classifica-

tion of alcoholics according to their purely external symptoms into occasional, chronic, and dipsomaniacs. The essential point is to find out in what neuro-psychic organization, and in what way, alcoholism shows itself, and I believe the revelation of the psychological character often hidden under the appearance of alcoholism is a noteworthy feature in the struggle against individual alcoholism; I think that it is indispensable for the treatment of alcoholics in general, and for the application of psychotherapy in particular.

OBSERVATIONS ON EPITHELIOMA OF THE SKIN, WITH SPECIAL REFERENCE TO ITS TREATMENT.

BY GRAHAM CHAMBERS, B.A., M.B.

Physician Toronto General Hospital; Associate Professor of Clinical Medicine,
University of Toronto.

Epithelioma of the skin is a fairly common affection. During the last twelve years the writer has treated over one hundred and fifty patients suffering from the disease. The ages of the patients varied from 32 to 38. In the series there were more men than women. The growths appeared on various parts of the body—face, scalp, ears, neck, chest and back of hands. The face was the site in over 90 per cent. of the cases. Most of the growths belonged to the superficial variety of epithelioma. None were very deeply seated. There were about 20 typical rodent ulcers. Paget's disease of the nipple was represented by one case. An epithelioma of the eyebrow started in the central part of a dermatitis, somewhat similar in appearance to that of the early stage of Paget's disease.

In about fifteen of the cases there were multiple lesions. In one there were two superficial epitheliomata in the lower lip, and one near the external canthus of the left eye. However, most of these cases belonged to the variety known as disseminated epithelioma. These were extremely interesting to study. In one there were nine epitheliomata, six on the face, and one, each, on the ear, neck and back of hand.

In the great majority of cases no causative agent could be determined. In one case, a burn, made by hot type metal, appeared to be an etiological factor, as the neoplasm appeared two months afterwards in the same spot.

With regard to treatment, no difficulty was experienced in causing the apparent disappearance of the neoplasms in all cases.

with the exception of six. These latter were of long standing, and had been improperly treated by X-rays. In about ten per cent. of the cases in which the growths were apparently removed a recurrence took place. Some of these recurrences were due to the faults of the patients refusing to remain under my care a sufficient time, etc.

The measures employed in treatment were excision, scraping, caustic, caustic pastes, caustic ointments, X-rays and radium bromide. Until seven years ago I treated all my cases by excision, scraping, or with caustics. Scraping, followed by the application of acid solution of mercuric nitrate, was a common method. This gave excellent results in small lesions, as far as a cure was concerned; but from a cosmetic standpoint it was faulty. Bongard's and Marsden's pastes were also used, generally successfully. Later I made use of X-rays, either alone or associated with caustics or scraping. The results as a whole have been better than from the former methods. From a cosmetic standpoint they have been much superior. However, I do not wish to convey the impression that X-rays are necessary for the successful treatment of all types of epithelioma of the skin. There are certain types which can be readily cured by excision, scraping, or by the application of a caustic. Nevertheless, X-rays are always a valuable adjunct, and we can always increase, if necessary, the probability of a permanent cure by using them with care. Again, there are certain types of epithelioma of the skin which cannot be cured without the use of X or radium rays. I shall speak of this again in the consideration of the treatment of certain forms of epithelioma of the skin.

The latest addition to our armamentarium in the treatment of cancer is radium bromide. My experience with this remedial agent is very limited, as I have only been using it for three months. Wickham, of Paris, and others who have used it, speak very highly of its efficiency.

In determining the form of treatment to be followed in a case of epithelioma of the skin, one should take into consideration:

- (a) The locality of the lesion.
- (b) The condition of the skin in which the cancer has taken origin.
- (c) The depth of the lesion in the skin (in most cases the growth is superficial).
- (d) The kind of lesion and particularly the amount of new growth. See condition of the lymph nodes.

The treatment should vary with the locality. In epithelioma of the lower lip, excision is, I believe, the proper treatment, although I have treated successfully several cases by the application

of an acid solution of mercuric nitrate, followed by X-rays. However, the growths in these cases were superficially situated. Moderately "hard" tubes were used, and the parts exposed for long periods.

In superficial epithelioma of the neck, or in fact any part where the growth is not very near a bone or tendon, excision is the proper treatment. On the other hand, in cases of epithelioma of the forehead, nose, canthus of eye, ear, back of hand or other parts, in which there is little tissue external to bone or tendon, X-rays should always be used, because it is impossible to cut wide of the lesion in excising the cancerous growth, and the application of a caustic to a cancer of considerable size may result in necrosis of the underlying bone, or disturbance of function of a tendon.

The condition of the skin in which the cancer begins should be considered before deciding on the method of treatment. As a rule, a cancer develops more rapidly in an area already diseased than in the normal skin. For example, cancer engrafted on a lupus ulcer has a high degree of malignancy. Excision, or the application of a strong caustic, such as Marsden's paste, would be the proper treatment for such a condition. In this connection, I might also mention that, according to my observations, repeated "burnings" with X-rays in an unsuccessful attempt to cure an epithelioma of the skin, increase the malignancy of the neoplasm and render the treatment very difficult. X-rays usually cannot be used effectively, as an exposure of a few minutes' duration is apt to produce inflammation in the diseased area. In such cases, other forms of treatment must be adopted.

The depth of the epithelioma in the skin is a most important point to consider in treatment. A practical method of classifying primary cancer of the skin is to divide them into two divisions, namely, superficial and deep. The lesion of a superficial epithelioma is superficially situated in the skin. It may spread laterally and vertically, but for some time, and in some cases, years, not downwards beyond the true skin. Eventually, in many cases, if the patients be not carried off by intercurrent affections, the cancerous process invades the subcutaneous and deeper tissues, and assumes some of the characters of the deep form. The clinical varieties known as superficial discoid, superficial papillary, "crater-form ulcer" of Hutchinson, Paget's disease of the nipple, rodent ulcer, and cases of disseminated epithelioma of the face, are primarily superficial epitheliomata.

As long as an epithelioma remains superficial, in the sense of which I speak, it can, as a rule, be cured by irradiations with X-rays. In some cases, a few exposures are sufficient, while in others

many are required. The epitheliomata which have thickened borders covered with epidermis, are not so susceptible to X-ray treatment as those which have no thickenings in their peripheral parts. Thus, I found Paget's disease of the nipple (early stage) and the ulcerative form of rodent ulcer very easy to cure with X-rays. The corneous layer of the epidermis, in particular, appears to me to interfere with the action of the irradiations. In the treatment, therefore, of an epithelioma with a thickened border, I invariably remove the corneous layer from its peripheral parts. This never interferes with the result from a cosmetic standpoint. In removing the corneous layer of the skin, I make use of a curette or a caustic. Again, when there is a considerable thickening of the border, it is well to remove by scraping, or destroy by means of a caustic, considerable of the new growth. This always lessens the time required for a cure with X-rays.

I wish here to make a few remarks concerning disseminated epithelioma of the face and its treatment.

This epithelioma begins as a small crusted lesion, with a sebaceous appearance. If the crust is removed, the underlying skin will be found to be finely papillomatous, and to readily bleed on irritation. This is called the first stage of the disease.

In the second stage the lesion is still covered with a crust, but the base is raised. If the crust is removed, a minute crater may be present in the centre of the base. In the third stage, all signs of a typical epitheliomatous ulcer—indurated border, central ulceration, etc., are present. It is interesting to note that if a recurrence takes place after apparent removal of the cancer, the growth is not a crusted lesion, as it was at the beginning of the disease, but a pearly or reddish papule, such as seen at the commencement of most epitheliomata of the skin. This appears to show that an epithelioma commencing as a crusted lesion with a sebaceous appearance may be practically the same as one beginning as a bead-like papule. They differ in appearance in the early stages of their evolution. They also differ in that the crusted lesions are frequently multiple (disseminated epithelioma).

The treatment of this variety of epitheliomata varies with the stage of evolution of the malignant process. In the first stage, after removal of the crust from the lesion, an application of acid solution of mercuric nitrate is sufficient. In the second stage the same procedures, followed by a few exposures to X-rays, will always produce a cure. In the third stage the treatment is the same as that of an epitheliomatous ulcer with indurated border.

THE INTERNAL TREATMENT OF EPITHELIOMA OF THE SKIN.

The exhibition of arsenic, trypsin, desiccated thyroid, and other remedies have been suggested by various authorities. In my hands arsenic is the only one which has been of value. In one case the administration of arsenic for two months apparently caused a superficial epithelioma of very recent origin to almost disappear. The arsenic was given in the form of Fowler's solution, 25 to 30 minims being given each day. Possibly, if the drug had been continued, a complete cure would have been effected. However, this could not be carried out, as the patient was anxious for a speedy cure, which was readily effected by superficial cauterization, followed by a few exposures of the growth to the X-rays.

My attention was drawn to the value of arsenic, administered internally, in the treatment of cancer of the skin, by the late Professor Lassar, of Berlin. He was of the opinion that it had a curative action in cases of cancer of recent origin. If this is true, and the writer is convinced that such is the case, then the exhibition of arsenic may prove of value in preventing the recurrence of a cancer after treatment by local procedures. I may say that in my practice arsenic is administered for this purpose.

THE VALUE OF RADIUM IN THE TREATMENT OF EPITHELIOMA OF THE SKIN.

The value of radio-therapy in the treatment of epithelioma of the skin is undoubtedly great. I feel that the use of X-rays increases the percentage of permanent cures. However, the Roentgen rays in therapeutics have certain drawbacks. They are difficult to apply in some localities. In deeply-seated lesions it is difficult to cause absorption of the new growth without producing inflammation and destruction of the overlying tissue. These facts are, I think, recognized by all who use X-rays in treatment. Radium does not appear to have these disadvantages. It is easy to apply in any region, and one can, with the aid of metallic filters, cause the absorption of a deep epithelioma of the skin without producing ulceration. The following is the explanation:

Radium bromide emits three kinds of rays, Q, B and Y. These differ markedly in their characters. The Q have little penetrating power, and can be very readily absorbed by a thin metal foil. The B rays are made up of emanations which vary in their power of penetration. Some are moderately, while others are deeply, penetrating. The Y rays are much more penetrating than the B rays, and exceed in penetration the rays from a "hard" vacuum tube. A sheet of lead, one centimetre in thickness completely ab-

sorbs both the Q and B rays, while the Y rays will pass through 30 centimetres of iron.

The physiological action of radium rays appears to be similar to that of X-rays. They produce inflammation and ulceration of the skin of much the same character as those caused by X-rays. These effects are mainly due to the Q rays and the B rays of moderately penetrating power. If one uses a filter to absorb these burning rays, one can apply radium for long periods without causing inflammation of the skin. The quantity of the B and Y rays passing through the filter can be readily calculated, and therefore, by noting the length of the exposure, the amount of irradiation can be determined.

Medicine

GRAHAM CHAMBERS, R. J. DWYER, GOLDWIN HOWLAND, GEO. W. ROSS, WM. D. YOUNG.

Sarcoma, involving the Crus. Corpora Quadrigemina and Optic Thalamus. JUDSON BURY, *Medical Record*.

Tumors of the brain in this region are rare, and the absence of headache, vomiting, giddiness and optic neuritis in this case was misleading. The corpora quadrigemina lesions showed: Pupils fail to react to light or accommodation. R. aperture greater than L. No movements of right eye except by ext. rectus, while left is weak in upward and outward movement. Nystagmus in all directions and rotatory. Right ptosis. The crus revealed left hemiparesis of arms, legs and face, and left hemianesthesia to some degree, while the reflexes were exaggerated and L. greater than R. Dysarthria was noted. The thalamus or red nucleus affection was shown by the left-sided ataxia and athetosis. Left astereognosis was completely lost.

G. W. H.

Exophthalmic Goitre. T. H. DEXTER, *Medical Review of Reviews*.

This article is a review of a much-reviewed subject, and the less common details referred to may be collated as follows:

(1) *Discussion of Etiology.* (a) Moebius-Greenfield theory of a thyroid secretion in excess producing exophthalmic goitre, but if diminished allowing unneutralized toxins to produce myxedema. (b) Myxedema also a metabolic disturbance. (c) Toxic and nutritional origin. (d) Nervous origin. (e) Gastro-intestinal toxemia as actual cause.

(2) *Function.* (a) Thyroid gland in general metabolism. (b) Parathyroid glands remove toxic substances absorbed from alimentary tract.

(3) *Relation of Parry's disease of Parathyroid.* Absence of diminution of secretion causes tremor and weakness.

(4) *Summary of Symptoms.* Goitre, exophthalmos, tachy-

cardia, palpitation, nervousness, tremors, pareses, local paralysis, mental signs, hyperesthesia of ear, eye and smell affections, pains, headaches, vertigo, paresthesia, disorders of stomach and intestines, emaciation, insomnia, loss of hair, pigmentation, pruritus, sweating, vesical irritability, sudden death.

(5) *Discussion of Serum Therapy.* (a) Serum of thyroidectomized animals at times beneficial. (b) Cytolic or antithyroid serum producing emaciation or death. (c) Cytolic serums of liver or kidney production. G. W. H.

Tumor of the Posterior-Superior Portion of Right Parietal Lobe. J. T. SPEAR, M.D., *Maryland Medical Journal*, November, 1909.

Case of tumor, commencing with transient numbness in right hand, followed later by headache, vomiting and slight edema of optic discs.

No motor paresis, but left reflexes greater than right, with left ankle clonus. Babinski absent. Sensation, however, gave dulling to pain, touch and temperature over left forearm, hand and leg and foot.

Loss of muscular sense in left foot and hand, and astereognosis of left hand when sweating also is abnormally marked. Case confirmed by operation. G. W. H.

Obstetrics

CHAS. J. C. O. HASTINGS, ARTHUR C. HENDRICK.

Diagnosis and Treatment of Occipito-Posterior Positions.

BY FREDERICK FENTON, M.D., *Canadian Journal of Medicine and Surgery.*

The writer starts out by stating that in his experience *unrecognized* occipito-posterior positions have led to more serious difficulties during labor, and more invalidism after, than all dystociae of other kinds put together. Since the condition he treats of occurs about once in one hundred and forty-four cases, while most other dystociae are much rarer, the writer may be quite correct in his statement.

The writer then gives us some signs to aid us in the diagnosis of the condition. These signs he divides into:

1. Suggestive signs.
2. Corroborative signs.

The first suggestive sign of occipito-posterior position is said to be the fact "that the case is not evidently an L. O. A." This information is obtained by abdominal palpation.

The second suggestive sign in order of sequence is the occurrence of "false" pains during the last week or ten days' pregnancy.

Third, the early rupture of the membranes is suggestive of some deviation from the normal.

Fourth, on vaginal examination, when one finds difficulty in reaching the os uteri with the fingers, that is considered suggestive.

Fifth, along with the difficulty in reaching the partially dilated os, the consciousness of learning little by the digital examination, the writer states that usually an occipito-anterior position is *easily* recognized.

For the corroborative signs one is referred to the text-books.

Treatment.—During the first stage of labor, the writer advises preservation of the membranes, and reasonable control of the pain, the former by the recumbent posture and rare vaginal examinations, the latter by morphia and hyoscine.

When the membranes have ruptured, if active contractions are present, a definite "time limit" is put upon the case of three hours

usually. The question now for one to decide, the writer states, is, "Why should I not interfere?"

The only contra-indication is when Nature seems to be taking care of the case herself, i.e., the os well-dilated, pains strong, etc., Then it is clearly a case of "Where angels fear to tread, etc."

But if the cervix is still small, it is dilated artificially with Voorhee's hydrostatic dilator.

Dilatation being complete, either naturally or artificially, the writer advises internal rotation by passing the whole hand into the vagina and then on into the uterus past the presenting head and, grasping the shoulders of the child, turn its body a quarter or half circle in the direction indicated, and when withdrawing the hand rotating the head similarly. Then apply forceps and deliver.

The writer, in conclusion, ably defends his practice of intra-uterine manipulation.

Note:

In the diagnosis of occipito-posterior positions a knowledge of their causation might be of some value.

Now the causation depends upon the failure of rotation, and the proper rotation depends upon good flexion of the head.

Flexion depends very much upon the character of the pains. When irregular and feeble, flexion is apt to be imperfect and vice versa.

When flexion is good, one is bound to get rotation, unless the pelvic floor be damaged from previous labors; then there is failure to push the occiput to the front.

Hence, if one can restore flexion and obtain good labor pains, the case may take care of itself.

A. C. H.

Rhinology, Laryngology and Otology

GEOFFREY BOYD, GILBERT ROYCE.

Nasal and Naso-Pharyngeal Conditions as Causative Factors in Aural Disease. By S. A. LELAND, M.D., Boston. *Laryngoscope*, October, 1909.

In this paper the author sets forth the physiological function of the Eustachian tube and the influence of normal respiration upon the membrana tympani. Every act of swallowing, most acts of speaking, and even those of respiration, cause a continuous movement of the inner mouth of the Eustachian tube, so that a pumping or sucking action is set up which serves to draw air and moisture from its interior. This is assisted by the elasticity of the drumhead itself. The presence of hyperplastic and hypertrophied naso-pharyngeal glands and consequent swollen mucous membrane, inhibits this pumping action, so that physiological ventilation and drainage are lost. This leads to retraction and effusions which macerate the interior of the tympanum, and adhesions are formed, producing the insidious adhesive catarrh which sooner or later becomes the O.M.C.C. of middle and later life.

The loss of the pumping action and the inactivity of the cilia lining the tube allow bacterial invasion and extending inflammation, resulting in the infective forms of middle ear disease and their complications. The treatment is clear: proper *nasal respiration*.

Improper nasal respiration due to obstructive conditions or to mouth breathing causes an increase in the lymphatic structures in the upper air passages, resulting in adenoid masses, and these pressing upon the tube inhibit its movements. The time to cure O.M.C.C. is before the initial earaches. The naso-pharynx, and especially the fossa of Rosenmüller should be cleaned out, and nasal respiration insisted on, for almost all cases of earache in children owe their origin to the presence of adenoids. G. R.

Reviews

Medical Gynecology. By S. Wyllis Bandler, M.D., Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital. Second revised edition. Octavo of 702 pages, with 150 original illustrations. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$5.00 net; half morocco, \$6.50 net. Canadian agents: The J. F. Hartz Co., Ltd., Toronto.

The second edition of Prof. Bandler's work presents in a most practical form a large amount of valuable material. The articles on methods of treatment, constipation, associated nervous conditions, and venereal diseases are exceptionally good, while the whole subject of medical gynecology is dealt with on sound rational principles.

Surgical conditions are also dealt with, and with these special attention is given to diagnosis and prognosis, with small reference to surgical treatment.

The illustrations throughout are clear, and the book is well printed. The work is essentially practical, and altogether it is an excellent book for the general practitioner.

Exercise in Education and Medicine. By R. Tait MacKenzie, A.B., M.D., Professor of Physical Education, and Director of the Department, University of Pennsylvania. Octavo of 406 pages, with 346 illustrations. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$3.50 net; half morocco, \$5.00 net. Canadian agents: The J. F. Hartz Co., Ltd., Toronto.

In his work recently published Professor McKenzie has set forth in a clear and interesting style the results of years of observation and study of the different methods of systematized exercise.

The work consists of two parts: exercise in education and exercise in medicine. The first part is chiefly descriptive and historical, explaining and illustrating massage, apparatus exercise and the German, Swedish and Japanese systems, as well as detailing physical education in schools and colleges and explaining the methods employed with the blind and the deaf-mutes.

The second part is principally therapeutic, and describes in detail the corrective treatment of the conditions which obtain in flat foot, scoliosis, round shoulders. It also shows the value of exercise in disorders of circulation and nutrition, and in locomotor

ataxia and other nervous diseases, the section on tabes being particularly good.

The book is neatly bound and exceptionally well illustrated; is not too large and is clearly printed. It is of interest and value to both layman and physician, and is pre-eminently a book of reference for all physical directors.

W. B. H.

Dorland's American Illustrated Medical Dictionary. A new and complete dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Nursing, and kindred branches; with new and elaborate tables and many handsome illustrations. Fifth revised edition. By W. A. Newman Dorland, M.D. Large octavo of 876 pages, with 2,000 new terms. Philadelphia and London: W. B. Saunders Company, 1909. Flexible leather, \$4.50 net; indexed, \$5.00 net. Canadian agents: The J. F. Hartz Co., Ltd., Toronto.

The fifth edition of *Dorland's Dictionary* presents many features which should recommend it to students and practitioners.

The ordinary dictionary matter has been made to include all the latest terms used in medicine, while special attention has been paid to new words in the realm of biology. The B. N. A. anatomical terminology has also been included, and in connection therewith a new plate has been added.

The tabulated information has also been revised to date, and the tables of tests, stain and staining methods have been arranged in a most acceptable manner.

The illustrations, while not elaborate, are instructive; the typography is attractive; the book itself is well bound and not too large, and altogether it is a splendid book for constant reference.

W. B. H.

Neumann's Cerebellar Abscess. By RICHARD LAKE, F.R.C.S. H. K. Lewis, London.

This work of some one hundred and fifty pages presents in a succinct form the present German ideas of cerebellar abscess of otitic origin.

He observes that about four-fifths of the cases of cerebellar abscess are due to the chronic form of middle ear disease. He claims, however, that the brain abscess is in the vast majority of instances secondary to a complicating suppurative labyrinthitis, the infection spreading thence chiefly by means of the internal auditory meatus and the aqueductus vestibuli.

Based upon the recognition of this condition, a difficulty arises

in differential diagnosis between pus in the labyrinth and cerebellar abscess, and while he recognizes that this is often impossible, he thinks that the nystagmus acts differently in the two cases, especially upon irritation with hot and cold irrigation.

The writer's mortality is about 75 per cent., which is rather higher than most records. He advocates attacking the disease via the mastoid.

The work is thoroughly reliable and scientific, and we recommend it to the profession.

G. E. W.

Medical Diagnosis. By J. G. WILSON, A.M., M.D. Philadelphia and Montreal: J. P. Lippincott Co.

A new work on medical diagnosis must have features that render it attractive to those physicians who have already other writers' work on their shelves, and this new volume of Dr. Wilson's is certainly from many standpoints a valuable addition to one's series of diagnosis.

The volume commences with an excellent chapter on medical anatomy, which is only weak for the student by the absence of actual fixed measurements for various organs, but which corrects this deficiency by excellent plates.

The subjective side of history-taking occupies but a brief chapter, and is followed by an article on thermometry.

Physical Diagnosis proper takes up the examination by inspection, palpation, percussion and auscultation of the thorax and abdomen, and while new material here is difficult to extract, yet the chapter is most compact, and especially the auscultation of cardiac murmurs is well written.

The following article on stomach and intestinal examination is noticeable for its completeness, while the writer makes the book more acceptable by very little discussion of the pros and cons of the tests, which render so many books tiresome reading for the student, but is most direct in his description of methods.

The ear, nose and throat and blood examination methods which follow are abbreviated, and naturally require reference to more specialized manuals; and the same is true of the work on the eye and nervous system.

A series of special subjects is next taken up—facies, joints, nutrition, mastication, gait, temperature and fever, respiratory phenomena, circulatory phenomena, digestive system, mouth, esophagus, vomiting and constipation, the skin, nails, hair, symptomatic disorders of the nervous system.

The conclusion of the first half of the book on general diagnosis

leaves the reader rather confused as to the method employed in the arrangement of the work, and while impressed by the compactness of each subject, the care taken in the description, one cannot but feel that the first part of the book is a little oddly arranged, perhaps taking more the shape of a reference volume for the older graduate rather than a primer for the senior student, which its contents prove it to be intended for.

The second division of the work on the diagnosis of diseases is, however, admirable, and is one of the most satisfactory, compact treatises on medicine (barring treatment) which I have read.

It is thoroughly up-to-date, and includes para-typhoid fevers, Vincent's angina, tuberculin methods of diagnosis, myasthenia gravis, and other recent additions to medical lore.

In short, the work is very compact throughout, easy for reference, and written in a very satisfactory manner, and I regard it as one of the most useful works that I possess in its particular field.

G. W. H.

American Practice of Surgery. Bryant and Buck. Vol. I. New York: Wm. Wood & Co.

We have just finished a perusal of the first volume of the *American System of Surgery*. The book contains some eight hundred well-written pages, divided into five parts, with an introductory chapter dealing with the evolution of surgery on the American continent.

Part I. treats of surgical pathology in a very broad sense. There is an exceptionally good article on inflammation; and tumor formations, with various theories and classifications, are discussed at length, while a special chapter is devoted to the evidence in favor of the parasitic origin of cancer.

Part II. contains a discussion of the complications and sequelae of surgical diseases. The article on shock is particularly good, embracing all the most recent work done upon that subject.

Parts III., IV., and V. deal with general surgical diagnosis, treatment and prognosis respectively. The chapter on epiphyses and their radiographic interpretation is profusely and beautifully illustrated, while the technique of radiographic work as applied to surgery is fully and clearly explained.

The preparation of patient, operator, ligatures, etc., is considered at length in one of the concluding chapters, while the final article deals with the various influences which bear upon surgical prognosis.

From a survey of this volume we feel that the authors have

made a wise and careful selection of contributors, and look forward with pleasure to reviewing the succeeding, and, if we may be permitted to use the term, specific volumes. G. E. W.

Atlas of External Diseases of the Eye for Physicians and Students. By DR. RICHARD GREEFF, Professor of Ophthalmology in the University of Berlin, and Chief of the Royal Ophthalmic Clinic in the Charité Hospital. Only authorized translation into English, by P. W. SUEDD, M.D., New York. With eighty-four illustrations in color from wax models, printed on sixty-four plates, with explanatory text. The illustrations are from models in the Pathoplastic Institute, Berlin. New York: Rebus Company, 1123 Broadway. Price, \$10.

This is a 135-page atlas containing wonderfully life-like representations of external eye diseases. This is made possible by the methods adopted, which consist in making wax models from the actual patient, this being done by the noted sculptor, F. Kolbow, Berlin, and photographic reproduction of these being made in four colors. Accompanying the illustrations are brief descriptions of the different diseases, discussing diagnosis, prognosis and therapy. One can recommend this book to the practitioner as a very useful edition. It is, indeed, almost a large clinic which he can keep in his library. W. H. L.

The Annals of Surgery issues its Fiftieth Volume.

On January 1st, 1885, there appeared in the literary medical world the first number of a new journal, given up entirely to general surgery. This radical departure from the old lines had the full endorsement of a large number of the leaders in surgery, both in Great Britain and the United States, among whom was Lord Lister, whose name led all the rest on the title-page. The seed was good, the soil fertile, and the journal grew and prospered. To-day it's the *Annals of Surgery of Philadelphia*. In December it blooms—blooms in full, and its subscribers will be treated to a choice collection of twenty-two original articles in the form of a jubilee number.

Eminent surgeons from England, Scotland, Denmark, France, Italy, Hawaii, Canada and the United States will contribute to this issue. Truly the editors and publishers deserve great praise for so fitly rounding out this fiftieth volume.

Dominion Medical Monthly

And Ontario Medical Journal

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Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 203 Beverley St., Toronto, Canada

VOL. XXXIII.

TORONTO, DECEMBER, 1909.

No. 6.

COMMENT FROM MONTH TO MONTH.

The Announcement of the Ontario Medical Council proceedings comes to hand some four months after the annual meeting, in July, when the news it contains is rather a bit stale. We believe the members of the College of Physicians and Surgeons would appreciate reading these proceedings if they were got before them with greater despatch, say in two weeks' time. To be of any particular value to the profession, they require to be read when fresh; after four months' time has elapsed, they are probably more profitable to the printers than to the profession.

From the report of the Prosecutor, we gather that, at the end of May 31st, 1909, there were 3,854 names on the Register, and of this number 491 have no address opposite their names. It might also have been added that in the published Register there are many whose addresses are incorrect. The published Register is, in fact, not of any particular great value to anyone, as it cannot be regarded as a correct register of the membership. Some are put down as unknown, who, ever since graduation fifteen years ago, have been practising all the time in the Province. Some have their addresses when they first registered many years ago as students.

and it may be some are left out of the published Register altogether. The value of a Register consists in its accuracy, while the value of an announcement consists in its early appearance. In this connection, it might be mentioned that Manitoba has abolished the annual \$2.00 fee. With a vivid recollection of the past experiences with this fee in Ontario, and a knowledge that there are still many from whom it is not collected, one would probably have no little temerity in attempting to revive a discussion on this much-mooted question of days gone by; but if one is compelled to pay, all should as well.

The Domain of Psychiatry.—For more than a century psychiatry has been considered a justifiable specialism in medicine, but owing to the social exigencies of caring for the insane in special ways, the science has been artificially delimited by external considerations rather than by intrinsic ones. It is proposed to indicate here how greatly this general acceptance of the layman's identification of psychiatry with the study of insanity has militated against the progress of the science by isolating it from the neighboring fields of medicine, and to show how research in it is still greatly impeded through the medical profession having unthinkingly adopted the definition of the laity. Allied specialisms must necessarily overlap, and there will probably always be a lack of agreement over the exact limitations of a given one (for instance, does the lachrymal duct come under the care of the ophthalmologist or of the rhinologist?), but there is usually no great difficulty about mapping out the broad outlines. If a little thought is given to the matter, few will disagree with this definition of the domain of psychiatry; the study of abnormal mental processes and of the cerebral functions correlated therewith.

Let us consider the second part of this study, which is one largely concerned with pathological anatomy. As is well known, this side of psychiatry is one evidently in need of greater development; for instance, in only a small minority of fatal asylum cases can one say from examination of the brain that the subject must have been insane, and with only one psychosis, general paralysis of the insane, have we formed a precise anatomical picture. The main obstacle to progress in this branch of the subject is the fact

that, apart from the disease just mentioned, the anatomical changes are exceedingly slight and difficult to interpret. In spite of the extraordinary advances that have been made in the technique of preparing and staining brain sections, it is often extremely hard to determine whether a given variation is an artefact, a physiological deviation from the normal, or a pathological change, and, if the latter, to estimate and appreciate the significance of it. To arrive at a just conclusion, it is evidently necessary to have a wide knowledge of the physiological variations of normal brains, and also of the pathological changes in other diseases that do not lead to mental symptoms. It is precisely here that the psychiatrist whose work is confined to the asylum is so grievously handicapped. If we take a simple example, that of Huntington's hereditary chorea, the point may perhaps be made clearer. As is generally known, this disease usually ends in dementia, so that anatomical study of it is chiefly possible in asylum practice. Every consideration, the neurological signs, the heredity, etc., point to the disease being due to some definite organic change in the brain. Yet when we try to determine the nature of this change we are at once met with the difficulty of interpreting the slight lesions found. To do this adequately it is necessary to contrast them with similar lesions due to hereditary degeneration, such as in the hereditary diplegias, or with the slight cortical lesions that occur in such conditions as amyotrophic lateral sclerosis; in a word, with other conditions that do not lead to dementia, and in which, therefore, the patient does not die in an asylum. The psychiatrist, however, is usually debarred from obtaining just the experience and opportunities that are essential for this study.

The other branch of the subject, which is concerned more directly with abnormal mentation, is in an even more deplorable plight. The psychogenesis of the individual features of insanity, the delusions, etc., is so involved and obscure that only in the past five years has a start been made in the elucidation of it, and in the tracing of some kind of orderly sequence in the bizarre and apparently meaningless manifestations. If there is one thing that this new science of clinical psychology has made more evident than another it is that no one can for a moment hope to learn how to

trace these involved psychological mechanisms, or to comprehend the pathogenesis of them, so long as he confines his investigations to pronounced cases of insanity. It is only by a painstaking study of the earlier cases, and above all of the allied conditions of obsessions, hysteria, psychasthenia, etc., that it is possible to obtain any insight into the more obscure phenomena of insanity. No amount of "experience" in the care of the insane can help him to unravel these problems, or can replace a preliminary study of the simpler problems in which the abnormal psychogenetic mechanisms are easier to trace and more accessible of observation. Again here the psychiatrist is at the outset of his study debarred from the opportunity to undergo this training. Let us consider the instance of dementia praecox, which is of especial local interest in that the sufferers from it comprise three-quarters of the insane in Canada. Now it is highly probable that there are more patients suffering from this disease outside the asylums than inside them, and a large percentage never develop "insanity" in the legal sense of the term. Surely it is these early, mild and abortive cases that should be most accessible to the psychiatrist who is attempting to unravel the difficult problems indicated above.

Enough perhaps has been said to show that the all-important obstacle at present in the path of progress in psychiatry is the arbitrary and harmful divorce of the science from internal medicine. In the past few years the two most hopeful directions in which our knowledge of psychiatry has advanced have been, on the one hand, the anatomical and chemical studies in general paralysis, and on the other the psychological investigations in dementia praecox based on the modern conceptions concerning hysteria. In both cases the advance has directly come about through closer contact between psychiatry and internal medicine, a fact that amply substantiates our argument. As regards the future it is not easy to say in what way this *rapprochement* can or will be made closer, but it is plain that neurology is the main link between the two. There are many practical advantages to be gained by separating neurology from psychiatry when the former is made an independent specialism, but there are none whatever to be gained where neurology is retained as a subordinate branch of internal

medicine, for this merely accentuates the division between the psychiatrist and the internist, by confining the former to asylum work and the latter to hospital work. Some intervening institution for nervous and mental diseases is needed that would serve to bind the two sets of workers together more closely, and to allow each to reap the benefit of work done in their separate fields.

It is in view of the considerations just advanced that we welcome the step recently taken by the Asylum Service of the Government of Ontario in instituting an out-patient department. The Committee of the Toronto General Hospital have given permission for their out-patient department on the corner of Chestnut Street to be used for this purpose, and we trust that this will prove a happy omen for the beginning of a closer connection in this Province between psychiatry and internal medicine, two fields that have been too long divorced from each other with detriment to both.

E. J.

The Uterine Curette. Unfortunately there is still a wide divergence of opinion as regards the use of the uterine curette, especially in acute puerperal infection. It requires some degree of courage to assume the attitude of an adverse critic of an operation that has been so universally considered as being positively safe and almost always beneficial, as is curettage of the uterus.

However, when one sees, in hospitals and in private practice, the almost indiscriminate use of this instrument and the not infrequent disastrous results of its injudicious use one feels the necessity of endeavoring to point out some of its unquestionable dangers and its comparatively limited field of usefulness.

In the first place the dilatation of the cervix is, in itself, a dangerous operation, and many fatal cases are reported as due to this step of the procedure from the blades of the dilator tearing through the cervix or even the uterine wall. The great danger of this accident is, obviously, in the soft, friable condition of the cervix following a miscarriage in early months of pregnancy. Then there is the danger of perforating the wall of the uterus in cases of extreme flexion. In view of the fact that there are, however,

conditions that justify and demand the use of the curette, we must keep in mind the fact that there is no other operation in connection with the female generative organs demanding greater care and precaution than dilating and curetting the uterus, and yet, as Herman recently remarked, "The fact that a patient is under the influence of an anesthetic seems to many sufficient excuse for curetting the uterus, and cited a very good example of this in a well-recognized gynecologist who had sent him a pamphlet describing what he considered a new operation for cystocele, in which he began by saying, "I first curette the uterus, etc." The use of the curette in non-puerperal cases should be limited to menorrhagia or metrorrhagia. In these cases it is valuable for both curative and diagnostic purposes and is occasionally a valuable aid in clearing up the diagnosis in suspected cases of malignancy. It's when we come to consider the use of the curette in the septic puerperal uterus that we find the most serious problem. When one considers the pathological anatomy of puerperal sepsis it is difficult to conceive of a more dangerous teaching than the indiscriminate use of this instrument in these cases, as the slightest intra-uterine manipulation, such as a simple douche, is often followed by a chill and an aggravation of the symptoms due to the opening up of fresh fields for absorption. The two great dangers of the curette in the septic puerperal uterus are, first, the breaking down of nature's walls of defence or the so-called leucocyte zone, and exposing the mouths of blood vessels and lymphatics to the invasion of the myriads of cocci left behind after the most careful curetting, as it has been demonstrated repeatedly, by post-mortem examinations of the curetted puerperal uterus, that it is impossible to remove all the diseased endometrium. This element of danger alone one feels ought to be enough to condemn the use of the instrument in these cases. Then you have the danger of perforating the soft and often very attenuated walls of the uterus, resulting in general septic peritonitis.

Does it not seem more rational to assist nature by utilizing the excellent drainage she supplies, in keeping the cervix patulous, by placing our patient in the Fowler position when we have the first

evidence of an abnormal discharge, and thereby drain our wound as we would any other infected wound?

The curette may be used with advantage after a miscarriage or where there is reason to suspect that portions of membrane or placenta have been left behind, but in these cases it should be used within the first two or three days, and even then the finger is usually the best and always the safest instrument to use.

There is one other objection to the curetting of the non-puerperal uterus, and that is the danger of producing sterility by causing a hyperinvolution of the uterus. I have had three cases come under my notice, in which I feel convinced that this was the cause of the subsequent sterility.

C. J. H.

Saskatchewan is Moving to Have a Minister of Health.

The Public Health Bill was presented in the Legislature on the 29th of November and its provisions explained. It provides for the creation of a bureau of health and fixes the machinery for its administration. There is to be a Minister of Health and a deputy to be known as a Commissioner of Health. Four medical practitioners will constitute an advisory health council to meet at stated periods. Thus does one of the new provinces blaze the way for the older and even for the Federal Government itself.

This will be the thin end of the wedge, and most likely in a few years the other provinces will follow the example set by Saskatchewan.

At a time when a tentative plan has but just been presented to President Taft for a Minister of Health and a Bureau of Health for the United States, it would seem opportune for the Canadian Medical Association to take up the matter again vigorously with the Canadian Government for a Bureau of Health for Canada.

News Items

DR. J. A. L. Mc ALPINE, Vancouver, has returned from Europe.

DR. LOUIS REICORD, Montreal, has gone to Germany to pursue graduate studies.

DR. ANDREW MACPHAIL has been appointed a governor of the Montreal Maternity Hospital.

Fire did some damage to the laboratories of the Provincial Board of Health in Toronto recently.

THAT Toronto should have a separate hospital for chronic cases is a proposal of Dr. Charles Sheard, M.H.O.

ALEXANDRIA Hospital, Montreal, has recently received \$30,000 in response to an appeal to the public for \$100,000. At this hospital during the first ten months of 1908, 367 patients were treated. For the same period this year the patients totalled 561.

DR. OSCAR KLOTZ, for seven years assistant to Professor Adami in the pathological department of McGill University, has been appointed pathologist to Pittsburg University. Dr. Klotz will assume his new duties about the New Year, and his appointment carries with it the supervision of the pathological departments in the college hospitals of that city, eight in number.

TORONTO hospitals have received from the city for the first ten months of the present year for free patients the following amounts: General, \$31,716.28; St. Michael's, \$18,421.60; Grace, \$5,124; Western, \$7,009.50; Convalescent, \$593.50; St. John's, \$607.60; Gravenhurst Free Hospital for Consumptives, \$6,587.70; Weston, \$14,622.06; Home for Incurables, \$8,922.05. The total cost to Toronto city for hospital maintenance in 1909 Dr. Sheard estimates at \$156,580. In 1900 the total cost was \$31,416.80.

DOMINION REGISTRATION.—Dr. Roddick called a meeting of the Special Committee of the Canadian Medical Association on Dominion Registration in Montreal on the 16th of November. There were present the following members of the committee: Drs. S. J. Tunstall, R. J. Blanchard, F. N. G. Starr, R. W. Powell, H. S. Birkett, E. P. Lachapelle, J. W. Daniel, M.P., Murray MacLaren, John Stewart, Geo. M. Campbell, S. R. Jenkins; representing various medical councils, Drs. G. L. Sinclair, Halifax; W. Spankie, Kingston; A. Simard and L. P. Normand, Quebec and Three Rivers. It is understood that amendments were proposed to the Roddick Act, which are now being prepared for publication. The Quebec representatives would not entertain the Act in that respect where it refers to education, believing it to be an infringement of provincial rights.

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RECIPROCITY IN THE WESTERN PROVINCES.

On the invitation of the Alberta Medical Council for a meeting of delegates of the four Western Provinces, British Columbia, Alberta, Saskatchewan and Manitoba, to consider a scheme of federation of these Provinces, there met at Banff, Alta., September 28th, 1909, the following delegates, duly accredited from their respective Provincial Medical Councils, viz.:

Manitoba—Dr. J. S. Grey, Winnipeg; Dr. J. N. Hutchinson, Winnipeg; Dr. R. S. Thornton, Deloraine.

Saskatchewan—Dr. A. W. Thomson, Regina; Dr. A. MacG. Young, Saskatoon; Dr. A. E. Kelly, Swift Current.

British Columbia—Dr. W. H. Sutherland, Revelstoke; Dr. A. P. Procter, Vancouver; Dr. A. S. Monro, Vancouver.

Alberta—Dr. R. G. Brett, Banff; Dr. G. A. Kennedy, Macleod; Dr. J. D. Lafferty, Calgary.

The sessions were held in the large hall at the Sanitarium Hotel, kindly placed at the disposal of the delegates by Dr. Brett.

At the first meeting Dr. Brett was elected Chairman, and Dr. Monro, Secretary.

After due deliberation and discussion the following resolutions were adopted:

Resolution One.—Resolved, That delegates of this Convention affirm the desirability of creating a Board of the Provinces of Manitoba, Saskatchewan, Alberta and British Columbia, with duties and powers as hereinafter provided. Carried.

Resolution Two.—Resolved, That the Federated Board be composed of two members from each of the four Provinces, such members to be appointed by the respective Provincial Medical Councils and to hold office for a period of three years. Carried.

Resolution Three.—Resolved, That the Federated Board be empowered to appoint an Examining Board, in number as may appear necessary. An equal number of such examiners from each of the four Provinces to be selected. Carried.

Resolution Four.—Resolved, That the possession of a certificate of having passed the examination of the Federated Board shall entitle the holder to registration in any one of the four Provinces upon payment of the registration fee of that Province. Carried.

Resolution Five.—Resolved, That the duties and powers of the Federated Board shall be:

(a) The determination and fixing the qualifications and conditions necessary for registration, including the courses of study to

be pursued by students, the examination to be undergone, and generally the requisites for the registration, except as hereinafter provided. Carried unanimously.

(b) To regulate the fee for examination and collection of same, which money shall be devoted to the payment of the necessary expenses of the Federated Board and the Board of Examiners. Carried.

Resolution Six. (a) Resolved, That any person who begins the study of medicine after the year 1912 shall possess a certificate from some university approved by the Board that he is a successful undergraduate of two years' standing or its equivalent qualification or a degree in Arts from an approved university.

(b) That the examination prescribed by the Federated Board shall call for a course of five years' study from those who graduate after 1912 and of four years from those who graduate before, of not less than six months in each year in a school of medicine approved by the Board, and it shall be a complete examination in all subjects, primary and final, specified hereinafter. Such examination to be no lower than any prescribed by any of the four Provincial Medical Boards.

(c) That the following be considered the division of subjects into primary and final, the Board to be left free to add any other not herein mentioned to either class:

Primary—Anatomy, Physiology and Histology, Jurisprudence and Toxicology, Materia Medica, Sanitary Science and Hygiene.

Final—Medicine—Clinical and Theoretical, Surgery, Pathology, Diseases of Women, Diseases of Children, Obstetrics, Therapeutics.

(d) That any registered practitioner resident in any one of the four Provinces at the time of the organization of the Federated Board shall be entitled to registration on passing before the Board of Examiners the following subjects only, viz.: Medicine—Clinical and Theoretical, Surgery, Pathology, Diseases of Women, Diseases of Children, Therapeutics, Obstetrics. Provided always that his term of residence in actual practice in the prescribed area has not been less than five years, upon his presenting himself for examination.

(e) That the standards in examination required be at least 50% in each of the primary subjects and at least 60% in each of the final subjects. Carried.

Resolution Seven.—The initial expenses of the Board and Examiners shall be met by a loan or loans contributed equally from the four Provinces, said loans to be repaid out of any surplus that may subsequently accrue from the examination fees. Carried.

Resolution Eight.—Resolved. That we record with pleasure the presence of Dr. Spankie, ex-President and member of the Ontario Medical Council, during our deliberations, and are gratified to learn that Ontario is desirous of joining in the federation movement.

We regret that we are unable at this date to entertain this proposition, owing to the imperfect development of this undertaking, but as soon as made possible by circumstances we will consider the application for admission of other Provinces of the Dominion to join in the Federation, and the several Provinces will be notified to that effect. Carried.

Resolution Nine.—Resolved. That the delegates submit these resolutions and recommendations to their respective Councils and report to the Chairman (Dr. Brett), who shall call such further meetings as may be necessary. Carried.

Resolution Ten.—Resolved. That this Convention desires to record its thanks to Dr. Brett for the use of his rooms and the many courtesies extended to the members during their deliberations. Carried.

Publishers' Department

HENRY K. WAMPOLE & Co., Perth, Ont., are receiving so many flattering clinical reports in the treatment of the acute symptoms of La Grippe, with Creo-Terpin Compound (Wampole), that if you are not using it, may we ask you to give it a fair trial. Some tell us they find it practically a specific, not alone in cases of La Grippe, but for any inflammation of the respiratory tract, and especially coughs of a spasmodic nature. In these cases Creo-Terpin Compound (Wampole) meets the indications of the inflammatory stage, rendering the secretions less purulent and tenacious, and producing a thoroughly aseptic condition throughout the whole respiratory tract. One physician writes that in cases of "Cold-in-the-head" he can, with Creo-Terpin Compound (Wampole), entirely prevent or correct the purulent character of the secretions, shorten the attack, very much lessen the probability of an extension to the laryngeal or bronchial area, and destroy the infectious character of coryza. Samples for trial will be sent upon request. They will send others if these are not sufficient. Creo-Terpin Compound and all other specialties can be obtained by any druggist from the laboratories at Perth, or any of their branch offices at Montreal, Ottawa, Toronto, Winnipeg and Vancouver.

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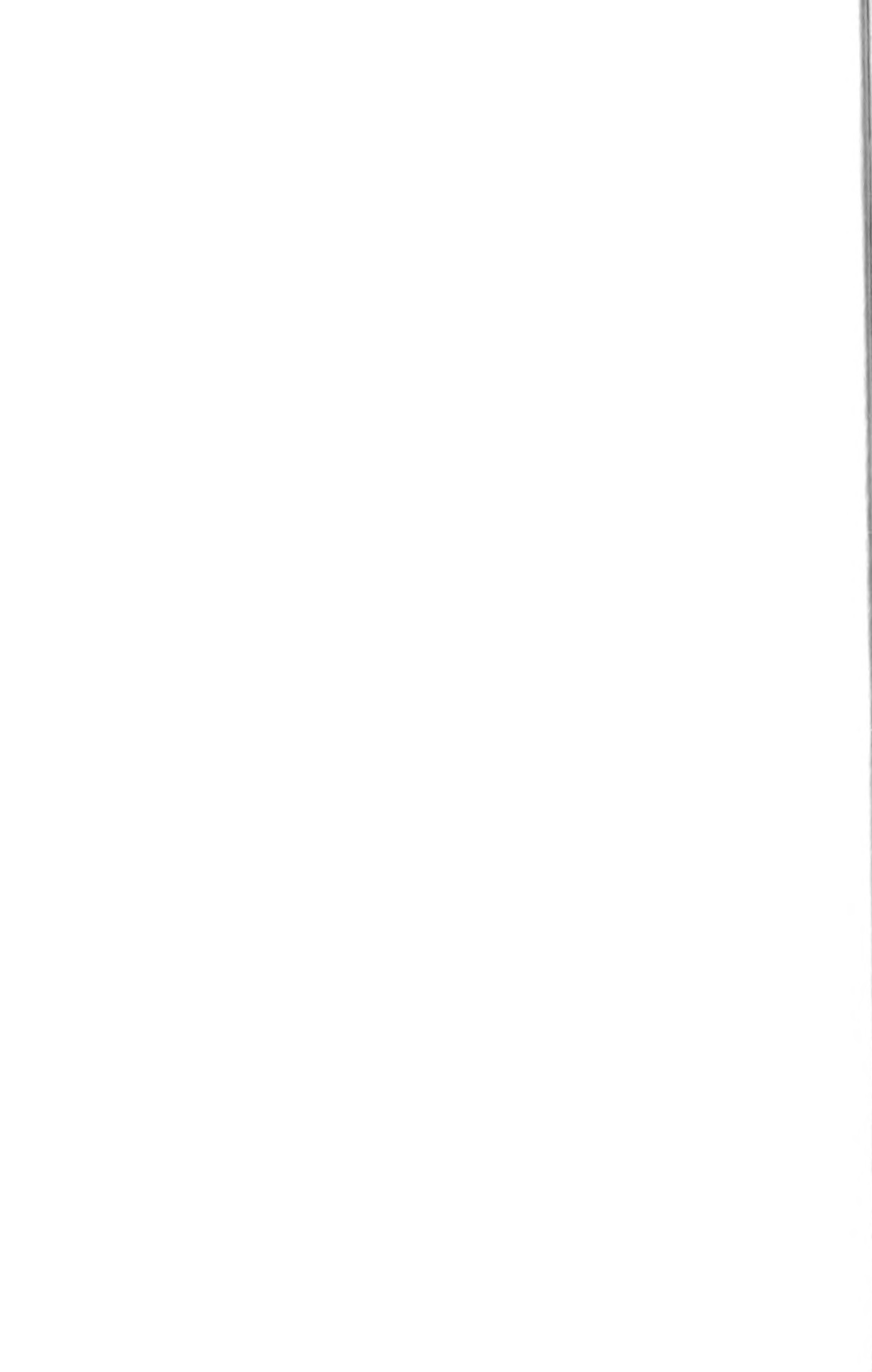
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the original condition which induced its use. In almost all the cases of pain, except, perhaps, those of the gravest surgical character, the exhibition of one of the approved derivatives of the coal tar series will be found amply sufficient in its anodyne and analgesic character to obtund all of the pain symptoms. Indeed, it is a matter of record that in the celebrated case of Barry, treated by Dr. A. V. L. Brokaw, Professor of Anatomy and Surgery, Missouri Medical College, and Surgeon to St. John's Hospital, where a thoracic wound, thirteen and a half inches in length, penetrating the lung cavity, was the feature, antikamnia tablets were used for the relief of pain, and it is now becoming quite a proposition with the profession as to whether morphia is not to be driven almost entirely from the field, in the broad general sense which has so long marked its use.

NEW KNIGHT OF ST. PATRICK.—The Earl of Arran has been appointed by the King to be a Knight of the Order of St. Patrick, in the place of the Earl of Carysfort, K.P., deceased. The Earl of Arran, the sixth bearer of the title, succeeded his father in 1901. He is also Viscount Sudley of Castle Gore, Baron Saunders of Deeps, and Baron Sudley, in the peerage of the United Kingdom. The family is descended from Gerald Gore, an Alderman of the City of London at the close of the sixteenth century, from one of whose sons is also derived the family of Gore Langton, represented by Earl Temple. The new Knight of St. Patrick was formerly adjutant and brevet major, Royal Horse Guards. He served in the Egyptian cavalry, and commanded the Royal Horse Guards squadron of the Household Cavalry in the South African campaign. The Earl of Arran is president of Bovril, Limited.



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